

CONCEPTS and ISSUES

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United States Marine Corps
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Published by Headquarters, Marine Corps
Requirements and Programs Division
Washington, D.C. 20380-0001

CONCEPTS and ISSUES

MAGTF Warfighting Center
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Marines: Relevant National Security Capabilities

Concepts and Issues describes the fundamental changes occurring in the national security arena, and the conceptual basis for the corresponding adjustments being undertaken in the United States Marine Corps. Up until last year, containment was the foundation concept--or unifying vision of our foreign policy. More than that, it was the framework for our military strategy and the military forces that both won the Cold War and performed so spectacularly in Operation *Desert Storm*. Today, containment is no longer valid--and it must be replaced with a new vision relevant to the new realities emerging every day.

This new vision must outline a strategy that can be used to identify the requirements for the kinds of military capabilities our Nation will need. Once these future military capabilities are identified, we can then determine the force structure and resources we are going to need.

Our strategic vision was established by President Bush in his *National Security Strategy*. The military capabilities needed to support this security concept have been determined--with the collective and active participation of each member of the Joint Chiefs of Staff--and detailed in the new *National Military Strategy*. The primary tenets of this strategy are a regional focus, responsive and flexible forces, and the capability to adapt to future threats to our national interests.

As a result of these developing needs, a new force concept has been developed. It is called the Base Force and it is a framework for organizing our smaller future force structure. The Base Force concept also incorporates our military doctrine for Joint operations. It provides the unified commanders with force choices from a pool of complementary military capabilities provided by the Services.

Our forward naval forces play an essential role in the Base Force and Joint operations. Naval forces are a preferred option for deterring and managing international instability, and responding rapidly to crises. On many occasions, the presence of U.S. forces off-shore has been enough to influence events ashore and defuse a crisis from becoming a violent conflict. When a crisis does escalate, naval expeditionary forces play a unique role. They act as an enabling force for the introduction of contingency forces from bases within the continental United States. In this manner, naval expeditionary forces create the "*bridge*" that permits the transition from our light to medium forward-deployed and early arriving forces, to the "heavy" contingency forces of our Sister Services. The contingency forces are structured to deliver the knock-out punch as part of our strategy's precept of decisive force.

Operation *Desert Storm* is an example of this enabling concept in action. The arrival of Marine forces and their prepositioned supplies in Saudi Arabia “bridged the gap” until heavy divisions could arrive from CONUS. Then, with the commencement of offensive air operations, naval expeditionary forces added their capabilities to those of the Army and Air Force in the conduct of a successful joint campaign.

This is the tenth edition of *Concepts and Issues*. Designed for a wide audience, it provides a description of the Marine Corps roles and structure, as well as the substantial relevance of these forces to our basic strategic concepts. It defines the role played by the Marine Corps in providing the military capabilities envisioned in our National Security Strategy to preserve peace around the world. It also provides brief descriptions of key Marine Corps programs and the resources required to enable the Marine Corps to provide the capabilities envisioned in the National Military Strategy.

Maintaining the naval expeditionary forces necessary for our Nation’s security requires an informed consensus among the American people, our elected Congressional representatives, and our national leadership. *Concepts and Issues* is a concise summary document designed to convey both the state of our Corps today and our role in the vision for the future.

A handwritten signature in black ink, reading "C.E. Mundy Jr." in a cursive style.

C.E. MUNDY, JR.
GENERAL, U.S. MARINE CORPS
COMMANDANT OF THE MARINE CORPS

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CHAPTER ONE

THE DILEMMA OF STRUCTURING IN AN UNCERTAIN WORLD

Following the extraordinary events in Eastern Europe and the ongoing dissolution of the Soviet Union, a debate has emerged over U.S. future security policy. As history often repeats itself, it is not surprising to find ourselves once again debating future military strategy and the associated military force structure needed to implement it. One thing is clear in the debate at this point; the forces we retain will be smaller; must be highly capable and relevant to the new world order; must be useful over a wide spectrum of contingencies; and finally, must be affordable.



CHAPTER ONE

THE DILEMMA OF STRUCTURING IN AN UNCERTAIN WORLD

Following the extraordinary events in Eastern Europe and the ongoing dissolution of the Soviet Union, a debate has emerged over U.S. future security policy. As history often repeats itself, it is not surprising to find ourselves once again debating future military strategy and the associated military force structure needed to implement it. One thing is clear in the debate at this point; the forces we retain will be smaller; must be highly capable and relevant to the new world order; must be useful over a wide spectrum of contingencies; and finally, must be affordable.



After every major war, America has sought to rapidly demobilize and refocus on domestic concerns. This was evident in the rapid reduction of our military forces after both World Wars and again after Vietnam. Sometimes a page of history is worth volumes of theoretical examples. Our own history provides strong precedent about how we should approach our present situation. We should carefully review our experience after the last great victory in our history — World War II. There are at least three significant parallels between today and the situation confronting the Armed Services following World War II:

- Today, as then, our Nation has emerged from a conflict as the premier world military power.
- Today, as then, there are wide-spread calls for dramatic reductions in defense spending in favor of domestic programs.
- And today, as then, there is an ongoing reevaluation of our future military strategy — and the type of military capabilities our Nation must maintain to support that strategy.

What Kind of Military Do We Need Against a Non-specific Threat?

The key goal of our National Security Strategy is maintaining regional balances and resolving disputes before they erupt. The ability to deter and limit regional conflicts is predicated upon the capacity of U.S. forces to influence regional powers. This influence is projected through forward presence and forward deployed forces. As demonstrated in *Desert Shield/Storm*, our ability to project significant combat power from CONUS is an enduring requirement with increased emphasis.

The potential “threats” we face include regional instability and the various forms of international terrorism. Further, the capabilities of regional powers are increasing as weapons technology proliferates. At least 10 other nations have or are developing nuclear weapons, 20 countries have chemical weapons, and 25 countries have or are developing ballistic missiles. Our most frequent missions are likely to be requests for humanitarian assistance, counternarcotics support, and a variety of other “peacetime” events that will require instant and practiced responses.

Perhaps the greatest threat we face is the loss of our ability to shape and influence events around the world, deterring and managing international instability, and responding rapidly to crises to prevent them from expanding to violent conflict. Special military capabilities are required to ensure this, and Marines, as an element of our Nation’s naval forces, have long been major contributors of these capabilities.

To effectively perform these missions, the Nation needs highly mobile, flexible, and potent forces. These requirements will result in an increased reliance on naval forces that traditionally have provided the kind of versatile and rapidly mobile packages called for in the

national security strategy. Readiness, balance and flexibility, rapid response and sustainment, and credible forcible entry will be the bench marks of America's reshaped military forces.

The Naval Services cannot perform these missions alone. Land and aerospace forces are required as well, and protection of those capabilities is essential to ensure our global security posture. In the decade to come, our Nation will continue to require amphibious forces, heavy land forces, maritime prepositioned forces, air, and air-borne forces. The challenge will be to preserve the correct mix of these capabilities. Naval expeditionary forces will be vital because they are able to be present, to influence events or to project potent and sustainable power to protect U.S. interests in likely littoral areas without violating national boundaries until actually committed.

What Kind of Marine Corps Do We Need?

It is against this backdrop that we Marines have examined ourselves. We started with a very basic question: What kind of a Marine Corps does the Nation need? We determined that, if it did not have the capabilities our Corps brings today, the United States would need to create them. We would need to create them, because a Marine Corps — as a part of naval power — offers the country some truly unique and special capabilities.

To appreciate these unique characteristics requires an understanding of why our Nation has a Marine Corps, what the intent of Congress was in its assignment of a role and structure for such a force, and how Marines are organized and equipped.

The great majority of the time, as an element of forward-deployed naval forces, we provide the country with the capability to influence the action at the time of our choosing. We are a crisis containment force that can prevent a crisis from becoming a contingency. When that deterrent fails, we provide the “*bridge*” from light forces to heavy forces. In other words, the capabilities we bring are those of a light-to-medium force that can be quickly — and most times, first — on the scene with enough muscle to shape the crisis and influence the action until a heavier force arrives if the crisis becomes a conflict.

Joint operations are the means to cohesively mold the diverse family of capabilities offered by all the services. For years, we Marines have seen ourselves as the most “joint” of all the armed services. We operate on the sea, with a naval task force, on the ground, or in the air — either independently, or with joint/combined forces. In addition, we provide the landward extension of naval campaigns and provide a fully integrated, combined arms force that bridges all three mediums of our Sister-Services' capabilities — land, sea, and air — as an *enabling* force. This enabling force facilitates the introduction of the heavy follow-on capabilities of our Sister Services.

We will remain a key element of the force that contains crises — stop the flash fires and the “small wars,” before they become

contingencies, or “big fights.” If they do expand, we will be the enabling force that holds the line to facilitate additional Joint forces deploying to fight the major regional contingencies. We are an affordable capability and one that our Nation must have to maintain its position of leadership in an uncertain and rapidly changing world — and in a climate of declining defense budgets.

Marine Corps Roles and Functions — Relevant, Ready, Capable

It is instructive to review the sense of Congress in the wake of the Korean War, because that conflict — a major regional contingency — is the kind of unforeseen major regional threat that our new national strategy foresees as the primary concern well into the next century.

The Congressional committee debates in 1951 and 1952 were, in essence, a reassessment of the post-World War defense decisions concerning strategy, defense spending, and military capabilities — the same issues being debated today! They were addressing the need for our Nation to be prepared for the unexpected — to ensure we have the capability to rapidly respond to a contingency similar to the invasion of South Korea. They recognized the need for U.S. global capabilities to protect *enduring* national interests, but also saw a need for those that would remain *intrinsically useful* in coping with future international uncertainties. They concluded that the Nation needs a force-in-readiness that is highly mobile, always at a high state of combat readiness, useful across a wide spectrum, and able to serve a principal role in containing a crisis while the American Nation mobilizes its vast defense machinery.



Marines climb the seawall at Inchon - September 15, 1950.

The 82nd Congress recognized that we have *enduring* worldwide national interests on a day-to-day basis. These interests were separate from the over-arching issue of the Cold War and the specter of nuclear war. They involved the need for military forces to maintain our global reach and respond to the “small brush fires” before they turn into wars. They clearly saw that we had a continuing need for a mix of naval and military capabilities that would remain *relevant* and *capable* in coping with the uncertainties of the future international security environment.

The *constancy* of these requirements is reflected in a logical new military strategy. The new strategy places a premium on rapidly deployable, combat-ready forces, that can be flexibly employed anywhere in the world for regional contingencies as part of joint operations. In addition, the strategy emphasizes the need for smaller, more flexible forces for presence and initial response to crises.

These are the characteristics that Marine expeditionary forces bring to the arsenal of national military capabilities. They are the same roles and functions that the Congress assigned the Marine Corps and codified in Title 10, U.S. Code:

- (1) Provide Fleet Marine Forces of combined arms for service with the fleet in the seizure or defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign.
- (2) Provide detachments and organizations for service on armed vessels of the Navy.
- (3) Provide security detachments for the protection of naval property at naval stations and bases.
- (4) Perform such other duties as the President may direct.

This legislation prescribes not only the role, but also the structure of the Marine Corps. In accordance with this public law, the Marine Corps is structured as 3 Divisions and 3 Aircraft Wings, with the requisite combat service support to support them. The intent of the law was to ensure that the Nation has a strong *force-in-readiness* to respond to crises short of general war. This highly ready force, in combination with the mobility assets provided by the Navy and Air Force, would be poised to respond to a wide variety of crises to deter adventurism or aggression around the globe. And should deterrence fail, to provide a ready, trained, capable force to enable the sequential introduction of our CONUS-based land and air forces to form the family of joint force capabilities needed to favorably resolve the conflict.

The concept of the Congress in structuring and assigning so specific a role to the Marine Corps is amplified by the language of the Committee reports of the House and Senate Armed Services Committees which forwarded the Bill to so establish a national force-in-readiness, designated by them to be the Marine Corps.

The Corps — The Concept of the 82nd Congress

“A versatile, Expeditionary Force in Readiness.”

“...A balanced force for a Naval Campaign (and) a Ground and Air striking Force...”

“...Always at a high state of combat readiness.”

“...Ready to suppress or contain international disturbances short of war.”

“...To hold aggression at bay while the American Nation mobilizes...”

How the Marines are Organized

The overall organization of the Marine Corps is driven by its readiness and responsiveness mandates and is divided into two broad categories:

- Operating Forces
- Supporting Establishment

The Operating Forces, considered the heart of the Marine Corps, constitute the crisis response and fighting power available to the war-fighting CINC's. Major elements include the Fleet Marine Forces, Marine Corps Security Forces at naval installations and shipboard detachments, and the Marine Security Guard Battalion with its detachments at embassies and consulates around the globe. About *seventy percent — just over 132,000 — of the 194,000 active duty Marines are assigned to the operating forces*, an extraordinarily efficient “tooth-to-tail ratio” among U.S. armed services.

Operating Forces made available to the CINC's are provided from Fleet Marine Force, Atlantic (FMFLant) and Fleet Marine Force, Pacific (FMFPac). Consistent with the Goldwater-Nichols Defense Reorganization Act, and DoD emphasis on joint operations, each war-fighting CINC is assigned a Marine Component for planning purposes and is allocated Marine forces for execution of his various operational plans. Under ordinary circumstances, because of geographic basing considerations and the desirability of naval force proximity, the two major Marine formations are closely aligned with the respective Fleet CINC's (Atlantic and Pacific). However, FMFLant and FMFPac perform Service component functions for USCINCLANT, USCINCEUR, and USCINCSOUTH; and USCINCPAC and USCINCCENT respectively.

The major operating force in FMFLant is II Marine Expeditionary Force or II MEF, located in the Carolinas. Under the Base Force concept outlined by the Secretary of Defense, II MEF would provide forces to the Atlantic Force.

The major operating forces in FMFPac are I MEF based in California and III MEF which is forward-based in the Pacific. Under the Base Force concept, III MEF provides forces to the Pacific Force while I MEF is the “swing” Marine element of the Contingency Force.



Marine Corps Security Forces

7,000 Marines protect key naval installations and ships worldwide. These Marines are part of the operating forces and contribute to the global combat power of the Marine Corps. These security forces include our two Marine Corps Security Force Battalions, Marine Barracks in CONUS and abroad, and Marine Detachments (afloat). The latter provide specialized capabilities aboard 15 naval combatants of the Fleet.

Each MCSF battalion contains a Fleet Antiterrorism Security Team (FAST) company. FAST Marines deploy to reinforce high threat locations, provide security for nuclear fueling operations and respond to other crises as directed by the Fleet CINC's. FAST Marines were utilized during Operations *Just Cause*, *Sharp Edge*, and *Desert Storm*.

The Marine Corps also provides 1,500 Marines to the Department of State for embassy security at 138 diplomatic posts in 129 different countries throughout the world.

Supporting Establishment

The Supporting Establishment — 32,000 Marines — man our 16 major bases, training activities and formal schools, the recruiting service, the Marine Corps Combat Development Command, Marine Corps Research, Development, and Acquisition Command, and Headquarters, Marine Corps. The Supporting Establishment is lean but its contributions are vital to the operational readiness of the Marine Corps. Our installations are national treasures that have been strategically located and efficiently managed to support our rapid response capability.

FIGURE 1-1:

MARINE CORPS TOTAL FORCE — FY 92 AUTHORIZATIONS

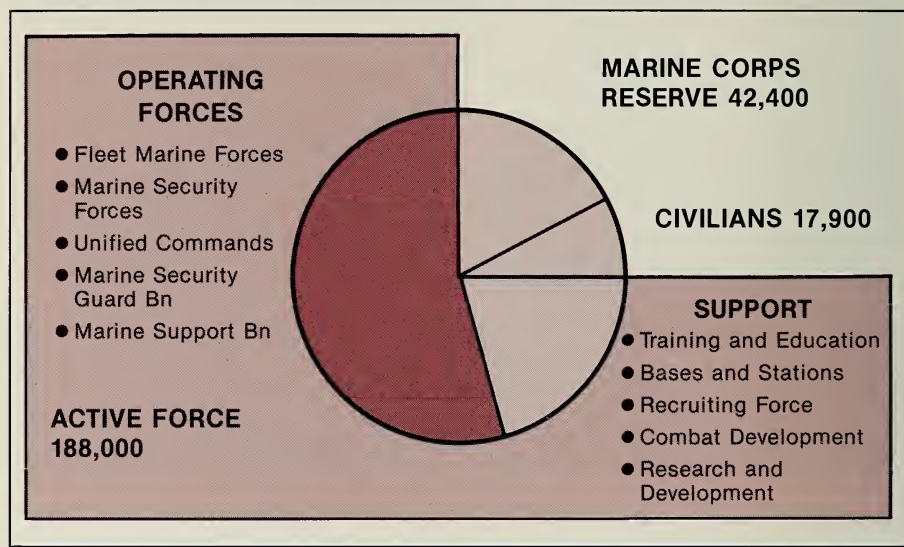


Figure 1-1 depicts the Marine Corps Total Force. There is a direct relationship between the size of the Marine Corps and the contribution made to our national defense. Approximately 85 percent of our operating forces and more than 50 percent of the Selected Marine Corps Reserve were deployed outside of CONUS during *Desert Storm*.

Large scale deployments, operations, and training exercises with allies are part of our training and presence requirements in peacetime as well. About 23 percent of our operating forces are forward-deployed during peacetime, which predicates a high operational tempo and a corresponding CONUS rotation base. Because the U.S. retains superpower responsibilities to maintain stability in areas where we have significant interests, the requirement for forward-deployed forces will continue.

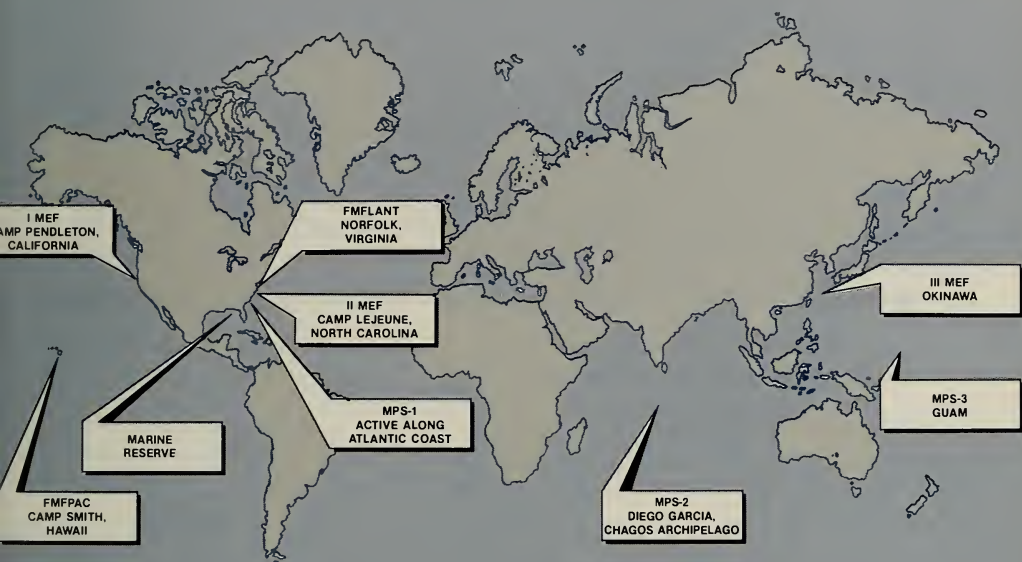
Reserves

In addition to our active forces, force expansion is made possible by the activation of the Marine Corps Reserve. The Marine Corps

Reserve, like the active forces, consists of a combined arms force with balanced ground, aviation, and support units. The major commands include the 4th Marine Division, the 4th Marine Aircraft Wing, and the 4th Force Service Support Group (FSSG). Units of these commands are located at 194 training centers in 46 States, Puerto Rico, and the District of Columbia.

Over the past several years, the Marine Corps Reserve has been closely integrated with its active counterparts in a truly Total Force. The Reserve provides individuals and specific units to augment and reinforce active capabilities whenever needed. The Marine Corps Reserve performed superbly in the recent crisis. Current training and operational initiatives are being emphasized to maintain our Total Force capabilities.

FIGURE 1-2:



Marine Air-Ground Task Force (MAGTF) Organization

The Marine Corps task organizes for combat consistent with its statutory tasking to "...provide forces of combined arms, including aviation..." by forming its forces into integrated, combined arms MAGTF's (pronounced "mag-taffs") used to accomplish an assigned mission. We specifically tailor MAGTF's for rapid deployment by air and/or sea.

Characteristics of the MAGTF

The MAGTF brings the following characteristics to the battlefield:

- ★ Ready for *expeditionary* service without reliance on developed infrastructure or host nation support.
- ★ Self-sustaining, through *sea-based* organic and pre-positioned supplies and equipment.
- ★ Special operations capable.
- ★ Task organized to accomplish specific missions or to provide maximum flexibility.
- ★ Able to combine or “composite” with other MAGTF’s or Joint forces to quickly build in size.
- ★ Strategically mobile via airlift, maritime prepositioning and amphibious shipping.
- ★ Capable of forcible entry.
- ★ Trained for all regions/environments, particularly small regional conflicts.
- ★ Fully integrated *air-ground-logistics* task force.
- ★ *Interoperable* with joint and allied forces.

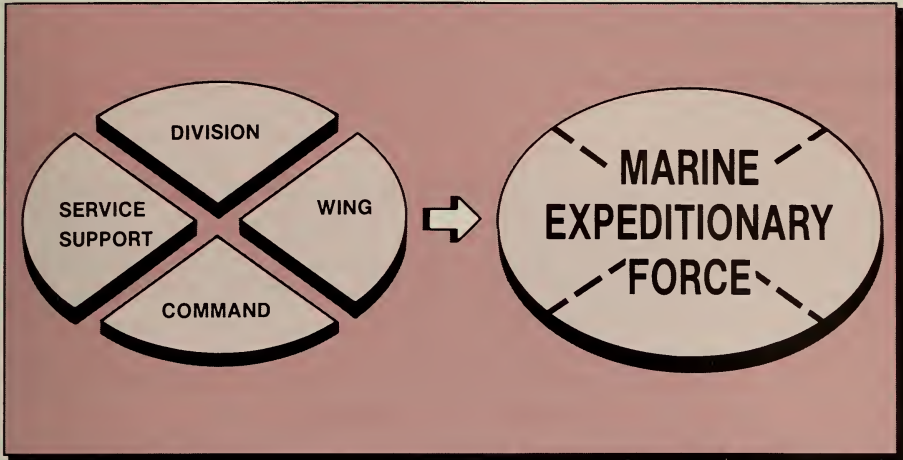
The Marine Corps organization for combat maximizes the total combat power of closely integrated air and ground operations. Our forces are trained and prepared for deployment to any part of the world on short notice. The MAGTF provides the combatant commander unique flexibility for an extraordinary range of options from amphibious operations to a wide variety of stability and limited-objective operations.

Types of MAGTF Organizations

A variety of types of MAGTF’s may be formed in support of national strategy and combatant CINC crisis response requirements. The Marine Expeditionary Force (MEF) is the Corps’ principal organization for combat and peacetime readiness, and is formed from the legislated Division and Aircraft Wing team. These MEF’s provide a reservoir of integrated combined arms combat power that can be task organized to simultaneously execute a wide range of global missions. The MAGTF’s are mission tailored and range in size from very powerful MEF’s, capable of prosecuting operational campaigns against the most capable potential threat; through rapidly deployable and employable Marine Expeditionary Units (MEU’s); to small special purpose forces (SPMAGTF’s) formed for specific missions or crises.

FIGURE 1-3:

THE MARINE AIR GROUND TASK FORCE



Special Operations Capabilities in MAGTF's

Special operations capabilities in MAGTF's are attained through progressive enhancement of individual and unit training utilizing specialized equipment and procedures. The fully developed SOC capability allows a MAGTF to execute a wide range of missions, including selected maritime special operations.

At a minimum, Marine forces deployed aboard naval ships can conduct the following maritime special operations within six hours of receipt of a warning order:

- Close-quarter battle.
- Specialized breaching.
- Reconnaissance and surveillance.
- Tactical recovery of aircraft and personnel.
- Seizure or destruction of offshore facilities (e.g., gas or oil platforms).
- In extremis hostage rescue.

Maritime Prepositioning Forces (MPF)

MPF gives the unified CINC's a new dimension in mobility, readiness, and global responsiveness. The MPF program involves 13 ships, organized in three squadrons. Maritime Prepositioning Squadron One (MPSRON-1) operates in the Eastern Atlantic, MPSRON-2 in the Indian Ocean, and MPSRON-3 in the Western Pacific. The MPF reduces MAGTF response time from weeks to days by prepositioning the bulk of the equipment and 30 days of supplies for a 16,000-man MEB aboard specially designed, strategically deployed ships. The MEB's personnel and selected equipment can be airlifted quickly using roughly 250 airlift sorties to an objective area to join with its equipment at a secure site. Equipment and supplies can also be selectively off-loaded to support smaller MAGTF's.

As graphically demonstrated in Operation *Desert Shield*, MPF's are integral to the rapid deployment of credible combat power. MPF program flexibility is being increased through selective and innovative loading plans and development of enhanced MPF deployment options. We are also developing specific capability packages tied to supporting unique mission requirements.

Crisis Action Modules

The Marine Corps has developed the concept of crisis action modules (CAM's) to support both our deployment methods and the requirements of adaptive planning. CAM's provide a planning framework for using all pillars of strategic mobility to deploy and build MAGTF's. These deployment pillars include:

- Strategic Airlift;
- Amphibious Ships; and
- Maritime Prepositioning

CAM's are building blocks which provide options for the sequential flow of Marine combat forces to the combatant CINC. Since Marines are capable of deploying by a variety and combination of means, our MAGTF's can optimally integrate the use of all available mobility assets to generate a decisive and responsive force in a very timely manner. CAM's can be used to fulfill requirements of any of the response options called for in the adaptive planning concept — flexible deterrent options, major flexible deterrent options, deploy to fight, or to counterattack.

Current Operations/Demonstrated Capability

The capabilities of Naval forces comprised of Navy and Marine Corps elements have never been more clearly demonstrated than during the past 18 months. The contingency in the Gulf, and the evacuation operations in Liberia and Somalia, as well as our humanitarian and disaster relief efforts in the Philippines, northern Iraq and Bangladesh have become just the latest examples of the Navy-Marine Corps team's flexible crisis response. A brief rundown of the wide-ranging activities of Marine forces over the past year and a half is instructive:

Operation *Sharp Edge*: A naval task force remained continuously on-station off the coast of Liberia for months while supporting embassy security and evacuating over 2,400 persons from harm's way. Marines of the task force reinforced the embassy and evacuated non-combatants from civil war-torn Liberia.

Operation *Eastern Exit*: Marine helicopters launched from Navy ships some 460 miles at sea, aerial refueled twice at night, and landed at dawn within the embassy compound in Mogadisha, Somalia virtually as the rebels reached the outer walls. They rescued 260 people and returned to safety without a single casualty or mechanical failure.

Operation *Desert Storm*: The Marine Corps provided mechanized forces against Saddam Hussein's "line of death" and amphibious forces successfully served as a strategic feint. Over 92,000 Marines were provided to U.S. Central Command while the Corps still maintained forces in the Western Pacific, Norway, and Latin America in support of concurrent security objectives. After the Gulf crisis, Marines provided humanitarian aid and security to the Kurds of northern Iraq as part of Operation *Provide Comfort*.

Operation *Sea Angel*: A naval task force, returning from *Desert Storm*, with Marine elements from the III Marine Expeditionary Force on Okinawa, together with other Service components, provided humanitarian relief to disaster victims in Bangladesh. The Marine-led Joint Task Force provided desperately needed engineers, water purification, transportation, hospital and medical care, and interim communication support to local authorities that had virtually no remaining capability to meet the humanitarian needs of its people.

These episodes graphically demonstrate the current utility of Naval Expeditionary Forces and demonstrate the continuing relevance of and need for such capabilities — even in a non-Soviet Union world. It is a remarkable fact that in a single 12-month period, we:

- Deployed 85 percent of our active expeditionary forces to a major regional contingency in Southwest Asia;
- Mobilized 65 percent of our Selected Marine Corps Reserve, much of it to the desert with their active duty counterparts;
- Embarked, and deployed the largest amphibious task force since World War II, employing all three of the Nation's MPS squadrons;
- Maintained every commitment everywhere else in the world our Nation assigned us to — from counternarcotics support in the jungles of Colombia and Peru, to joint exercises in Central American, and to Arctic operations in Northern Norway;
- Maintained a force for seven months at sea off strife-torn Liberia as security for our embassy there and as an evacuation force for 2,400 diplomats and citizens;
- Fought an integrated combined-arms offensive against extensive Iraqi defenses; and,
- Maintained 1,200 Marines in the oft-tense Philippines, serving as the security and facilitating force for evacuation of 18,000 U.S. personnel and dependents after the Mt. Pinatubo eruption, and provided the expeditionary engineering support to dig Subic Bay and Cubi Point out from under the ash of Pinatubo.



In sum, during peak operations during *Desert Shield* and *Desert Storm* this past year, we had at sea, or in the field, 107,000 of the total 116,000 Marines and Sailors of our Fleet Marine Forces. We reconstituted and returned to station, in operationally capable condition, our three MPS squadrons; redeployed every Marine, Sailor, and item of equipment from Saudi Arabia; and then returned 24,000 of our operating forces to sea, or on foreign shore, without their dependents, to continue to do what the Nation has Marines in peacetime to do — to influence, to deter, to be positioned for forward presence, and to respond when necessary.

Conclusion — Ready, Relevant, and Capable

Recent events in Panama, the Philippines, Liberia, Somalia, Bangladesh and the Persian Gulf underscore how quickly challenges can emerge and how difficult it is to influence events at a time and place of our choosing. As our access to overseas bases becomes more restricted, *naval forces and the ability to project power from the sea increases in importance*. Maintaining a robust expeditionary capability, even in an era of constrained fiscal resources, provides the National Command Authority with politically viable, cost-effective, and versatile options.

The Marine Corps will continue to provide a multi-mission force that serves the needs of the Nation. We will be prepared to provide complementary capabilities and enabling operations in support of joint forces. While the Marine Corps provides useful defense capabilities, it is but one part of the defense “team.” The team is

extremely capable, with each military Service contributing the capabilities called for in the national strategy. The Marine Corps will continue to provide flexible forces with unique capabilities for rapid expeditionary employment, in conjunction with the Navy, as a *key component* to this Nation's response capability.

In short, time and conditions have created an environment that once again places naval forces — the Navy and the Marine Corps — in a keystone position of our national security posture. We provide the flexible and responsive forces our great Nation must have if it is to maintain a position of influence and leadership in an uncertain and rapidly changing world.

A central tenet of our newly published National Military Strategy is the continued need to be able to mediate economic and social strife, and to deter regional aggressors. Despite the end of the Cold War, we do not live in peaceful times, and we must be prepared to address the uncertainty of a troubled world. Probably the biggest mistake we could make would be to assume that the future can be predicted with certainty.

If anything, the history of the last century, one filled with many surprises, should dispel that notion. The only thing that is certain is that U.S. military forces will be called upon again. However, predicting the time, place, and circumstances will continue to be difficult as graphically demonstrated in crises in Liberia, Kuwait, Somalia, and Iraq; as well as natural disasters in Bangladesh and in the Philippines. It should not go undetected that in all six cases cited above, the Marine Corps provided a principal component in each crisis. This is illustrative of the future military requirements anticipated in our new strategy, as well as the constancy of the Marine Corps' contribution to the Nation.

CHAPTER TWO

CONCEPTS AND ISSUES

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Maintaining highly capable Marine expeditionary forces is consistent with our strategy and the force structure and warfighting concepts that buttress it.



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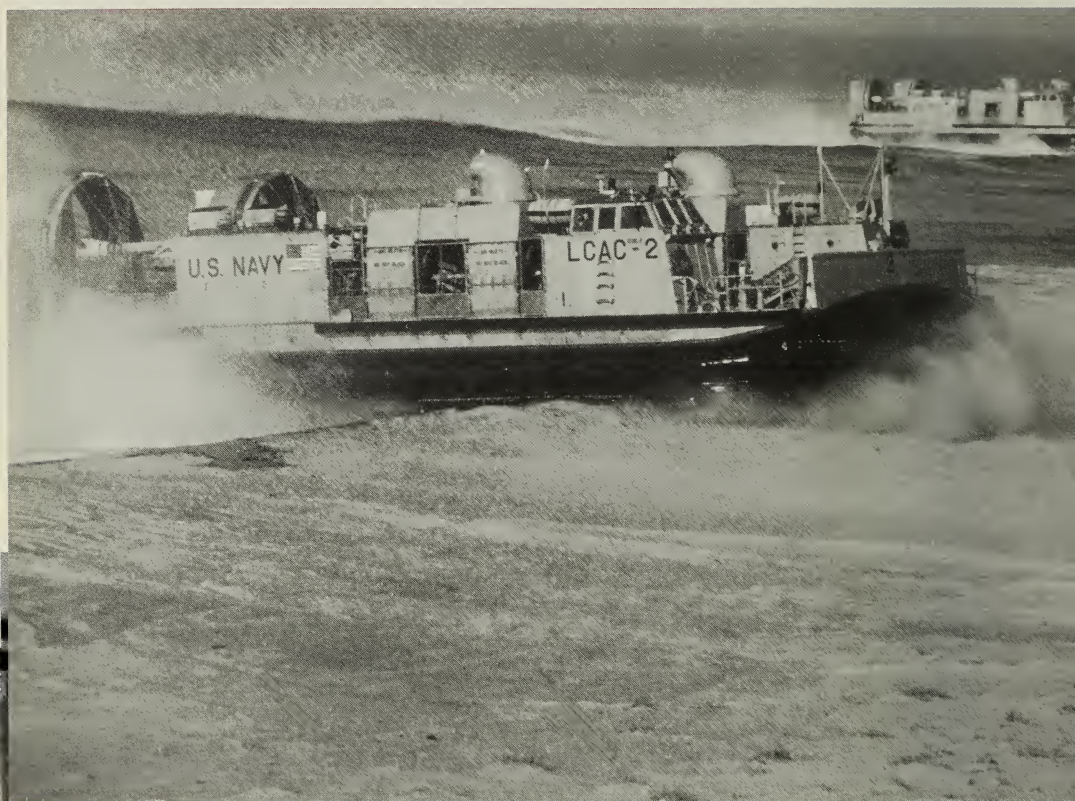
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Marines and the New World Order



The New National Military Strategy — Where Naval Forces Fit

Discussion

The world has changed and so has the military strategy that will guide the U.S. military into the future. The strategy is built upon four foundations:

- Strategic Deterrence
- Forward Presence
- Crisis Response
- Reconstitution

The meaning and appreciation of these concepts in supporting a regionally focused national strategy will set the framework for the principal roles to be filled by the Navy and Marine Corps in the 1990's. Deterrence for naval forces will not only encompass deterring the use of nuclear weapons but also providing a strong conventional deterrent to potential aggression. Deterring threats to the denial of strategic resources (especially oil) and the cutting of sea lines of communications for trade and transport, as well as threats to U.S. friends and allies, will become increasingly important.

Naval forces will continue to play a stabilizing role by virtue of their forward presence posture. The challenge for Navy and Marine Corps forces will be to do better with less. Amphibious Ready Groups and Carrier Battle Groups will have to maintain global coverage with fewer and more capable assets. Additionally, greater emphasis will be placed on security assistance programs, arms control agreements, and collective security arrangements. The Marine Corps provides forces for Security Assistance programs and has expertise in forward presence operations and humanitarian efforts.

Finally, naval forces will provide important capabilities in crisis response scenarios where U.S. forces must be projected to protect U.S. citizens and interests. In this regard, Marine Corps forward deployed expeditionary forces with their inherent capabilities of rapid response and self-sustainment will have increased value as our initial response.

As a superpower with global responsibilities, the U.S. must maintain forward-deployed, deterrent, and response capabilities that can deter, influence, and resolve crisis situations. Naval forces, as a primary instrument of foreign policy, provide these capabilities.

Marine Corps Position

The Navy and Marine Corps support the evolving new military strategy and provide unique and complementary capabilities within the strategy.

Base Force Concept

Discussion

The Base Force is a concept that redefines the national security structure of the U.S. in a way which responds to *enduring* reality amid a world undergoing profound *change*. The Base Force meets the new realities head on, including the need to attain maximum value from our defense expenditures.

Evaluation of the declining Soviet threat, the global interests of the U.S., and the need to retain capabilities to rapidly bring forces to bear in unexpected crises and regional contingencies, produced these enduring needs:

- *Strategic forces* which preserve deterrence.
- Conventional forces which maintain U.S. forward presence in the Atlantic and Pacific.
- *Contingency* and reinforcement forces capable of worldwide response.

Brought together, these force packages make up the Base Force and give the U.S. the ability to respond confidently and effectively to the demands of the next decade. Marine forces, in light of their flexibility and utility, are key elements of these force packages. Specifically, a Marine Expeditionary Force is assigned to the Atlantic, Pacific and Contingency forces.

Forces for crisis response and regional contingencies will initially be drawn largely from the active component. Essential support for deployment, as well as sustaining combat support and combat service support will be provided by the Reserves. For large or protracted crises, we will rely upon the Total Force.

While the Base Force is designed to strike a balance between anticipated requirements and affordability, care must be exercised as end strengths are reduced to ensure that the Marine Corps Base Force is manned at a level sufficient to provide, now and in the future, the combat capabilities and operational tempo envisioned by the concept.

Marine Corps Position

The Base Force seeks to maintain the minimum force required to meet U.S. enduring interests. It acknowledges fiscal constraints and balances the demands of geopolitical realities, reduced access to foreign bases, and security relationships with friends and allies. The Marine Corps supports the Base Force concept.

The Marines and Joint Operations

Discussion

Marine forces are trained, organized, and equipped to effectively operate in Joint environments. Our capabilities complement those of the other Services and contribute to a *joint family of capabilities*. Other Services are assigned a role within a specific medium — air, land, or sea. The Marine Corps, however, is a *three dimensional force* which operates across the spectrum of conflict on land, sea, and air.

The Marine Corps' primary focus is on conflict in the most crisis prone areas of the world, the littoral areas. Our training and organization emphasizes flexible, balanced, and sustainable forces. These forces are designed and trained to be fully interoperable with joint and allied forces.

Our planning efforts emphasize those capabilities required for peacetime military activities and to respond to instability and crisis containment. Although capable of operating across the operational spectrum, Marines primarily fulfill the role of a light to medium expeditionary force that provides the *bridge* from complementary light forces to heavier, sustained combat forces. Our forces and capabilities facilitate and enable joint force sequencing.

The Marine Corps is the enabling force which allows the introduction and follow-on of heavier forces. Our amphibious forcible entry and maritime prepositioning capability are examples of how Marines enable other forces to bring their unique capabilities to joint operations. In other words, Marine forces are on scene early, and often are the first on scene, with enough muscle to shape the battlefield and influence the action until heavier forces arrive.

Marine forces are part of the Nation's naval expeditionary capability. This capability is composed of Navy expeditionary fleets and Marine expeditionary forces. These forces have the ability to deploy rapidly and to operate indefinitely in a crisis without access to land bases. They possess a high degree of selectivity as to when, where, and what force is to be employed. They provide a diplomatic rheostat which can be adjusted up or down to influence, or to respond, as necessary.

Marine Corps Position

The Marine Corps supports complementary Service capabilities for joint operations. Marine forces provide the landward extension of naval expeditionary forces. Once ashore they can be an integral part of joint operations. They possess an *integrated, sustainable, combined arms* capability that bridges and complements all three mediums of our Sister-Services' capabilities — land, sea, and air.

Marine Deployment Capabilities

Discussion

Execution of the Marine Corps' expeditionary mission is achieved through the integrated and task organized MAGTF. There are three pillars of MAGTF deployment, each capable of combining with another to take advantage of the strategic mobility assets at hand:

- Sealift/sea-basing
- Airlift
- Maritime prepositioning

To more effectively meet the needs of the Joint CINC's, the Marine Corps has developed crisis action modules (CAM's) to support each of these deployment methods. CAM's are a highly refined planning technique for using all pillars of strategic lift to build and deploy MAGTF's in accordance with joint force sequencing requirements. The CAM concept enhances deployability of Marine forces by more effectively and efficiently using strategic mobility assets.

MAGTF's are capable of deploying by a variety and combination of means. Rather than deploying by a single option, MAGTF's integrate the use of all the assets available for both building and deploying forces. This modular/building block approach enables us to deploy a full range of mission tailored forces. Thus, these MAGTF's can be built by combining elements of our Air Contingency, Amphibious Ready, and Maritime Prepositioned Forces from all three MEF's.

Marine Corps Position

The ability to deploy power projection forces and to sustain them is crucial in a unstable and unpredictable world. As overseas bases disappear, force deployability becomes more critical. The Marine Corps has developed the means to employ all means of global deployability to enhance its deterrent value and its crisis response capabilities.

Expeditionary Capability

Discussion

The term “*expeditionary force*” refers to an armed force organized to accomplish a specific objective in a foreign country. The term implies the capability to move, on short notice, to a distant location. This force must be properly structured and equipped to fit on available transport, by air or by sea. The force must have sufficient combat power and logistic sustainability to accomplish whatever it is tasked to do. The tasks can range from a series of forward presence operations that support our interests and allies, to full hostilities on foreign shores.

An expeditionary force should accomplish both the transit to the destination and the military mission with little if any dependence on outside assistance. It should not be designed to operate with extensive external support, or Host Nation Support from allies. It must be prepared to operate within a wide range of possible operational environments and terrain, from cold weather operations in Norway to jungle operations in Southeast Asia. Its equipment must be designed to function effectively across this wide spectrum as well. Weapons and equipment systems must be rugged and require minimal maintenance and logistics support.

A force which has the ability to make a forcible entry into an objective area being denied by an opposing government or military force is ideally suited to expeditionary missions. A truly expeditionary force should not rely on the permission of foreign governments to transit through airspace or waterways to accomplish its mission.

Expeditionary forces must be prepared for immediate deployment. This mandates a high level of readiness and training. An integrated force that shares the same doctrine and operational techniques will satisfy this expeditionary criteria. A force pulled together at the last moment, or one that rarely exercises as an entity, is not well prepared to execute expeditionary tasks. Expeditionary forces will often be the initial introduction of U.S. military forces. Thus, the force must be interoperable with follow on Joint forces. Because of this fact, our Marine forces are capable of effective command and control in a joint/combined operational environment.

Marine Corps Position

Expeditionary forces are a unique capability with special force structure and equipment considerations. Using the criteria established above, the Marine Corps matches up as the world's premier expeditionary force-in-readiness.

Investments and Modernization for the 21st Century



Strategic Mobility

Discussion

The Nation's ability to project influence and military forces over great distances depends upon adequate strategic mobility resources. As the Nation's premier expeditionary fighting force, the Marine Corps needs sufficient strategic sealift and airlift support to deploy forces to crisis areas with sufficient staying power to deter or resolve the situation with force, or to secure a foothold to permit a rapid buildup of follow-on forces.

The Marine Corps requires *strategic sealift* ships to deploy the assault follow-on echelon (AFOE) of its amphibious MAGTF's. The AFOE, composed of assault troops, equipment and accompanying supplies, supports and sustains an amphibious assault. It is normally required within five days after the initiation of an assault landing.

The Marine Corps also requires *strategic airlift* to deploy its Air Contingency Forces and the fly-in echelon of Maritime Prepositioning Forces. Furthermore, amphibious forces, once established ashore, will nearly always depend on strategic airlift for transport of critical supplies and equipment.

A joint Navy/Marine Corps initiative, conducted in conjunction with the ongoing Mobility Requirements Study (MRS) within DoD has analyzed the shipping requirements for a notional amphibious MEB AFOE. The analysis defines a requirement for a mix of Roll-on/Roll-off, break-bulk, tanker, and container capable ships. The analysis recommendation included in the final MRS report is to have in-stream, off-loading capable Ready Reserve Force ships earmarked on each coast to support contingencies involving amphibious forces, sited near likely seaports of embarkation, and maintained at an enhanced readiness level.

Marine Corps Position

The Marine Corps supports the development of a balanced and cost effective mobility force that will provide flexibility and responsiveness to the warfighting CINC's. The Marine Corps supports increased funding to augment the Ready Reserve Fleet and to enhance the fleet's readiness level.

Amphibious Ships

Discussion

Amphibious ship levels are a fundamental component of the Nation's forward military presence and crisis response capability. Amphibious forces are mobile, flexible, highly capable, and ready to defend our national interests without necessarily committing the nation on foreign soil.

We must have sufficient levels of amphibious lift to provide deterrence in regions marked by instability and to provide rapid response to crisis. Amphibious ships provide the ability to quickly mass force and move to the vicinity of an emerging crisis. Forward deployed naval forces are particularly well suited to this mission posture, especially along the world's *littorals* where the majority of the world's population and flash points are located.

Amphibious forces are capable sea-bases that transport Marine fighting units with everything needed to fight: troops, combat vehicles and sustaining supplies. Organic ship-to-shore systems including ship-based aircraft and hovercraft (LCAC) provide the amphibious forces their unique tactical capability and mission flexibility.

As forward overseas basing of U.S. ground forces and air forces is reduced, the value of amphibious forces to respond to many potential crises around the globe increases. Timely closure of these forces facilitates *crisis deterrence* by increasing the options available to the NCA. If crisis management fails and conflict ensues, the forward deployed amphibious forces on the scene become the "tip of the spear" for the follow-on joint action. On-scene amphibious forces provide the capability to secure ports and airfields for the introduction of follow-on forces.

The ability of amphibious forces to provide timely crisis response is contingent on our forward deployed posture. If there are insufficient forces to maintain an appropriate level of amphibious presence, the responsiveness and effectiveness of the force is reduced with a commensurate increase in risk.

Marine Corps Position

Naval expeditionary forces, with embarked Marines, provide the Nation with a flexible crisis response force and the most formidable projection capability in the world. This capability is based on the availability of amphibious ships. A 3.0 MEB-sized lift is required to preserve our responsiveness and peacetime forward presence. This operational requirement has been reduced to 2.5 MEB-sized lift capability due to fiscal affordability. To preserve this valuable capability, any further reductions to the amphibious force should be carefully considered.

Marine Corps Modernization

Discussion

The Marine Corps has conducted a thorough assessment of combat operations in Operation *Desert Storm*. Lessons learned have been factored into the evaluation of our force structure and have caused adjustments to Marine Corps modernization needs. The next budget development cycle will fully incorporate all of our operational experience from the Gulf crisis and provide an integrated long term direction for our continued viability as a premier fighting force in the 21st century.

While the dollars provided by the Congress during the last decade were applied in a manner consistent with the Marine Corps reputation for responsible stewardship, several aging weapon systems and emerging requirements must be addressed. Experience in Southwest Asia highlighted requirements for:

- Enhanced tactical mobility,
- Reliable long range communications,
- Greater night vision capabilities,
- Communications interoperability, and
- Enlarged target acquisition and tactical reconnaissance assets.

Furthermore, the requirement for indirect fire support systems with longer range and greater operational flexibility was demonstrated.

Fulfilling these requirements against the backdrop of a shrinking defense budget mandates the prudent application of resources. Our goal is to incorporate advanced technologies which have been proven to be feasible and cost effective. We will only apply procurement resources when we are certain that the technological advantage will produce a significant improvement over current capability. We have expanded our Product Improvement Programs (PIP's) and are applying selective modifications to existing platforms to generate the greatest improvement to combat power at the least cost.

Marine Corps Position

The Marine Corps remains committed to maintaining its technological edge as a premier expeditionary force. Maintaining this edge in the face of significantly reduced resources is a challenge. Resource priorities should continue to remain targeted against high payoff areas such as power projection technologies, command and control systems, and night fighting capabilities.

Power Projection Capabilities

Discussion

Modernization of the Nation's power projection capability is needed to support the national military strategy. A robust ability to project decisive combat power from the sea adds significantly to our conventional deterrent, as well as our ability to respond in a crisis. Proliferation of sophisticated missiles and advanced threat systems has led to a series of concept-based modernization requirements. The Marine Corps has developed these requirements consistent with our *maneuver warfare* doctrine with an emphasis on its application from the sea. Maneuver warfare from the sea provides for assaults to be launched further offshore than current capabilities, providing greater flexibility, speed, and combat power, while simultaneously reducing the risk to our forces. Critical technological initiatives underway to maintain and enhance this concept include:

- The *Advanced Amphibious Assault* program will provide the Marines with a credible and advanced forcible entry system to fulfill our mission needs in the 21st Century.
- The *Medium Lift Replacement* (MLR) program is designed to replace our 40-year-old technology in our current medium-lift assault fleet and the venerable CH-46 *Sea Knight*. Both the MLR and the AAA programs are discussed in greater detail in chapter 4.
- The *Shallow Water Mine Countermeasures* (SWMCM) program is designed to develop mine countermeasure systems capable of providing for the detection and limited clearance/neutralization of mines and obstacles in and around landing zones. Maturing technology will dramatically improve our countermine capabilities.
- *Naval Surface Fire Support* (NSFS) is a critical part of maneuver warfare assault concepts. It serves as the primary means of close-in, indirect fire support until landing force artillery is established ashore. NSFS must provide all-weather, around-the-clock, direct support to Marine Air-Ground Task Forces. With the retirement of the last remaining battleship in FY-92, naval gunfire in support of landing operations rests solely on the range and lethality of 5-inch guns.

Marine Corps Position

Maneuver warfare provides an expanded dimension of combat power and survivability to projection forces. Investment initiatives which emphasize surface and vertical assault tactical mobility, countermine, and fire support capabilities are essential to successful prosecution of power projection missions.

Marine Corps Infrastructure

Discussion

The Marine Corps is a premier institution prepared to serve our Nation's interests throughout the world. Our installations and facilities serve as the homes to these forces, and by any measure of size, location, capability or training utility, are efficient and well suited to carry the Marine Corps well into the 21st Century. Throughout our history, the Marines Corps has stressed operations that minimize excess or redundant capacities. As such, efficient use of these near perfect resources has been emphasized in our infrastructure development.

Our 16 major bases and stations represent just 4 percent of the total DoD infrastructure. Our infrastructure has been strategically located to support our rapid response mission. Our bases and stations are sited near ports of embarkation, both sea and air, on both coasts. These installations consist of:

- 1.6 million acres
- 27,000 buildings
- 40 miles of shoreline
- 165,000 acres of timber, agriculture and protected lands
- One million acres of training ground
- Over 22,000 family housing units
- Over 16,500 civilian personnel

Our installations are *national treasures*, provided to us through the foresight and determination of the National Command Authority, Congress, and the American public. To ensure their availability to future generations of Marines, their care and environmental stewardship have always remained a paramount commitment of all Marines and Marine Corps civilian employees.

That we take our stewardship responsibilities seriously is evidenced by the excellent facilities and training areas we have, and the numerous awards and accolades they have received. During these times of shrinking resources, the collective leadership skills and managerial abilities resident in both the Operating Forces and Supporting Establishment will be focused on the protection of America's investment in our extraordinary installations.

Marine Corps Position

The infrastructure of the Marine Corps provides quality of life, quality support, and training facilities to our Marines. These bases and stations have been carefully designed to support our operational commitments, and have been well managed to ensure that the investment in these national assets is preserved.

Marine Aviation

Discussion

Marine tactical aviation provides a unique and highly effective capability to the CINC's which does not duplicate capabilities provided by any other service. Although we may be able to operate with less aircraft as we downsize, we must retain our fixed wing tactical aviation assets. Essentially, we cannot do what the Nation needs the Marine Corps to do — we cannot provide the credible range of capabilities required of naval expeditionary forces — without Marine Aviation.

Our aviation assets are equipped to provide the fully-responsive air support that Marine expeditionary forces need. The firepower contribution of tactical aviation is a part of the overall "combat system" we call the Marine Air-Ground Task Force. Marine aviation is easily integrated into an Air-Ground task force because they are organized, trained, and equipped from the ground up for expeditionary, combined-arms operations. Marine aircraft can generate the needed high sortie rates during close air support missions because they are based close to ground combat units, and they are built to be operated from a wider range of austere bases and runways. Marine aircraft are designed with this expeditionary requirement from the blue-print to the final product. Additionally, Marine aircraft incorporate design characteristics such as: special corrosion control features, folding wings and blades, tail hooks, and rotor brakes on helicopters; that make them capable of extended deployments afloat.

Marine Aviation is:

NAVAL

- Employ naval aircraft, armaments, command and control, and maintenance procedures.
- Enable CINC's to conduct naval campaigns using sea-based and shore-based naval air in cooperation.
- Augment carrier air wings when necessary.
- Based ashore, they allow CINC's to exploit Carriers as mobile strike forces, rather than tie them to static operation areas.

EXPEDITIONARY

- Trained and equipped for carrier operations and equipped with tailhooks.
- Organized and equipped with self-contained maintenance and logistic support for rapid deployment.
- Can operate from austere forward bases or rapidly-constructed Expeditionary Air Fields.

INTEGRATED INTO MARINE AIR-GROUND TASK FORCES

- Responsive and synergistic because they are integrated in terms of training, doctrine, equipment, and exercises with the MAGTF.
- Provide the full range and depth of firepower required by mobile expeditionary forces.
- Enable MAGTF's to fight as self-sustaining, expeditionary, naval maneuver forces.

Marine Corps Position

Marine and Navy tactical aviation squadrons are complementary not duplicative. They provide the National Command Authority and the CINC's a flexible force that can be tailored to meet unique threat, geographic, and operational requirements — the type of force required in the uncertain, emerging world order.



During *Desert Storm*, Marine aviation provided responsive support to the MAGTF operating out of an austere expeditionary airfield called “Lonesome Dove” that was constructed in the desert in a matter of days. This illustrates the unique capabilities of Marine aviation.

Marine Corps Manpower Section



Force Size

Discussion

Dynamic changes in the international security situation, coupled with fiscal realities, dictate force reductions throughout the DoD. While the budgetary trend is clear, the nature of the security threat is neither certain nor stable. The challenge facing the Nation is to preserve those forces most relevant to our needs and that provide the broadest contribution to our national security.

While the defense establishment reshapes and downsizes, the Marine Corps will provide the necessary balance to the risks generated by today's volatile world. Traditionally, the Marine Corps' contributions have focused on regional stability and the day-to-day tasks of peacetime military operations and forward presence. Preserving those forces that can deter aggression and are mobile, versatile, and available to respond to a wide range of missions is consistent with both the President's National Security Strategy and the intent of Congress.

The planned drawdown in end strength will have manageable impact on the relevant and proven capabilities of the Marine Corps. However, a more rapid reduction than planned will not only affect our ability to man our legislated 3 Division/3 Wing structure, the reservoir from which we draw our combat forces, but will limit the operational scope of the Marine Corps expeditionary capabilities we provide today. Equally important, without a reduction in operational commitments, an adequate end strength is needed to maintain a satisfactory "optempo" for our Marines and their families.

We are presently drawing down the active force by approximately 6,000 Marines per year. Our drawdown has been carefully planned and will be executed with a combination of reduced accessions and normal attrition. We will approach an end strength of roughly 177,000 Marines by the end of FY-94, a level required to maintain our projected "optempo" and forward basing posture.

Marine Corps Position

Traditionally, the Marine Corps has focused on regional conflict and crisis response. Our ability to continue to deter and respond to crises and maintain our global presence underscores the need for a Marine Corps that is credibly manned.

Total Force Quality

Discussion

The Marine Corps is a people-intensive and people-oriented organization. Our total budget comprises less than 5 percent of the DoD budget; yet we provide 12 percent of the Nation's operating forces and have the highest ratio of combatants-to-support personnel in DoD.

Among the many reasons for our success in combat and as an expeditionary force-in-readiness is our commitment to the Total Force concept. Our active duty Marines, reserve Marines, and civilian employees work together closely to ensure that we are ready, relevant and capable as a Total Force. Operation *Desert Storm* validated this concept and served to reinforce the validity of a quality force and the concept of "team building".

The increasing complexity of today's technology demands highly educated recruits and officer candidates. These young men and women are some of the "best and brightest" that our Nation has to offer. Ninety-eight percent of our enlisted recruits are high school graduates and 70 percent score above the average on the Armed Forces Enlisted Test. Similarly, our officer candidates are among the most highly motivated and best qualified graduates of America's colleges and universities.

We are extremely proud of the fact that we have the best officer to enlisted ratio in DoD (more than eight enlisted for every one officer). The majority of the enlisted force (67.8 percent) are in the lower four grades and the rest are sergeants and staff non-commissioned officers. Similarly, the majority of our officers (72.3 percent) are below the grade of captain. The average age of our enlisted Marines is 25. The officers average 33 years of age.

Historically, our many successes on the battlefield can be attributed to quality leadership. Marines realize that winning is a team effort and every team must have competent, intelligent and morally strong leaders. We expect, and ultimately demand, our career force to lead, not just follow. From the very first days of recruit, or officer candidate training we instill confidence in our Marines and expect them to lead and follow at the appropriate time.

We get this quality force by seeking high quality young Americans for service as U.S. Marines. Downsizing to a smaller Corps demands that every Marine be multi-talented. As we look to the years ahead, this requirement will remain.

Reserves

The Total Force Policy, adopted in 1973, was not fully tested until Operation *Desert Storm*. Highly trained reserve units responded quickly and decisively to the regional crisis in Southwest Asia by augmenting and reinforcing our active duty forces. The Marine Corps Reserve contributed significantly to the combat capability of, the multi-national force in the Gulf and validated the Corps total force policy.

The Marine Corps Reserve is a versatile and responsive organization that complements the roles and structure of the Fleet Marine Force. *Desert Storm* proved that the Marine Corps Reserve can effectively respond to the changing nature of the international security environment. The call-up of approximately 54 percent of the Selected Marine Corps Reserve demonstrated that they are an integral part of the Total Force.

Civilian Manpower

Our 17 thousand civilian “Marines” are a crucial component of our Total Force. Wherever possible, supporting establishment billets are staffed with civilians. This frees Marines to fill billets in combat units, thus enhancing training, readiness, and sustainability. Our civilian personnel force is employed in a wide variety of professional, technical, trade, and administrative functions, and they provide essential continuity within their functional areas.

With each civilian supporting more than ten Marines, the Marine Corps has the leanest civilian manpower in DoD. Streamlining efforts continue as tighter budgets force further personnel cuts. The magnitude of these reductions prevent us from conducting “business as usual.” The Marine Corps is developing new methods for balancing critical workload requirements with the available work force. Such initiatives as the Manpower Requirements Assessment Survey (MRAS) will allow the Marine Corps to develop the most efficient and effective civilian work force possible.

Marine Corps Position

The Marine Corps has built an efficient Total Force. Maintaining our expeditionary readiness is dependent on a high quality Total Force, including both active and Reserve Marines, as well as our civilian personnel.

Quality of Life

Discussion

The Marine Corps continues to emphasize successful quality of life (QOL) programs that directly contribute to the combat readiness of our force. Our quality of life programs include a variety of family support services, command religious programs, and military housing. Special programs, such as those that deal directly with personal and financial problems, have become especially important to our Marines and their families. Other programs, such as those provided by the 18 Family Service Centers in the United States and abroad, provide invaluable assistance to Marines and their families. These centers handled approximately 450,000 contacts during FY-91 (an increase of 100,000 from the previous year). Most of the centers went to 24-hour operations during the Gulf crisis and a task force went to Saudi Arabia to support the Marines there with a series of programs designed to assist Marines with family separations and deployment related issues.

The profession of arms generates special challenges for Marines and their families, including extended separations. Our QOL programs include the following:

- Relocation assistance,
- Exceptional Family Member,
- Key Wives,
- Family Readiness,
- Child Development Services,
- Family Advocacy,
- Financial counselling,
- Command Religious Program

These programs provide the unit commander the unique resources to address these challenges proactively. These QOL programs provide a high return on our investment and contribute to preserving a high state of manpower readiness.

Family housing is another key QOL component. Our housing programs are dedicated to providing excellent service to our military members in their effort to find and live in suitable affordable housing. These programs include a commitment to maintaining government-owned property, revitalizing neighborhoods through repair projects, and providing referral services.

Marine Corps Position

Successful quality of life programs are vital to combat readiness. The Marine Corps is committed to these programs and will seek new and innovative ways to improve upon them.

Recruiting a Quality Force

Discussion

Our success on the battlefield of tomorrow will depend greatly on our continued efforts to maintain extremely high recruiting standards. As always, the rigorous screening process will not stop at the recruiting stations, it will continue throughout the recruit training phase at Parris Island or San Diego. The final product will not be compromised.

The Marine Corps continues on a steady and successful course of commissioning and enlisting young Americans of high quality. Our recruiting effort met with great success in FY-91 as we attained our numerical requirements and exceeded all of our quality goals. More than 97 percent of our enlisted accessions were education category Tier I high school graduates and our officer accessions were among the best and brightest that America's colleges and universities had to offer.

Today's recruiting defines the quality of tomorrow's Corps. As we proceed toward the 21st century, we continue to seek out high quality young Americans for service as Marines. Downsizing to a smaller Corps demands that every Marine be multi-talented. In peacetime, therefore, the Marine Corps hedges against uncertainty by maintaining a force that is both "tough and smart." We accomplish this with the help of a multi-dimensional recruiting program.

As we look to the years ahead, many factors will have a dramatic impact on the recruiting challenge. Competition from the private sector, for the same high quality civilian that is sought by the Marine Corps, can only increase in light of the shrinking manpower pool in the United States. The Marine Corps will continue to focus its attention on the *highest quality* youth population available through the creative use of available marketing tools.

Marine Corps Position

Recruiting is an up-front investment and our high state of combat readiness is attributed directly to the quality of our Marines. The Marine Corps will continue to maintain its high recruiting standards and we will only enlist responsible, highly motivated, and intelligent individuals.

Training and Education

Discussion

Marines must continually train for war. Our challenge is to continue to provide the Nation with a versatile, expeditionary force in readiness in the face of diminishing resources and decreasing manpower levels.

Training: By adhering to the well-defined principles of mission and performance-oriented, and standards-based training, the Marine Corps will meet this challenge.

The training process, both individual and collective, is a complex and sophisticated system. To implement this system effectively and *efficiently*, the Marine Corps has incorporated a Corps-wide *Training Management (TM)* process. As a top-down process based on the concept of centralized management and decentralized execution, TM is the systematic methodology Marine leaders use to analyze, design, develop, implement, and evaluate training. Using the tenets of our basic warfighting doctrine and *Total Quality Leadership (TQL)*, TM results in proactive, well-planned training with consistency of purpose.

The Marine Battle Skills Training (MBST) program represents the fundamental core of our Marine training. It provides all enlisted Marines with a basic foundation in combat skills. Whether a basic infantryman, a computer programmer, or an aircraft mechanic, each Marine is prepared for combat by this common core of training. MBST not only provides initial training, but reinforcement in basic combat skills as a Marine progresses in grade, responsibility, and experience.

Marines must be capable of responding to the full spectrum of possible threats. To achieve the edge to win, the Corps has recently instituted the *Unit Training Management (UTM)* program which allows commanders to train to the tasks which most specifically prepares their Marines for the missions and contingencies assigned to their unit.

Education: Complementing our training in meeting the Marine Corps' Training and Education challenge is the Professional Military Education (PME) of our Marines.

The Marine Corps University (MCU), established in 1989, provides the structure and policy for the Marine Corps, worldwide PME network, integrating both resident and nonresident PME programs. Located at Quantico, Va, the MCU is comprised of the Marine Corps War College, Command and Staff College, School of Advanced Warfighting, Amphibious Warfare School, Communications Officers School, The Basic School, SNCO Academy MCCDC, and 16 affiliated SNCO Academies or NCO Schools at other commands.

The Marine Corps Research Center (MCRC), under construction and due for completion in December of 1992, will function as the hub of University activities and will dramatically improve the ability of the Marine Corps to collect, store, retrieve, and disseminate information related to the profession of arms. The MCRC's optical disk storage and retrieval capabilities will be integrated with the Marine Corps Data Network (MCDN), providing Marines worldwide access to this comprehensive repository of information.

The MCU will continue to act as the focal point for a PME system which imparts a common base of professional knowledge throughout the Corps. Several ongoing initiatives, including integration of Reserve needs, and the completion of the Marine Corps Research Center will bring to fruition the Marine Corps' vision of the integrated facilities and programs needed to educate Marines in the art of war and produce leaders with the confidence and vision to exercise sound military judgment in battle.

Marine Corps Position


The Marine Corps' integrated, focused, yet flexible system of training provides a solid, reinforceable foundation for all Marines. This training, coupled with the career-long PME programs, allows the Marine Corps to provide the Nation with flexible, responsive, trained and intellectually prepared Marines to meet any contingency.





CHAPTER THREE

U.S. MARINES IN OPERATION DESERT SHIELD/ STORM



Operations *Desert Shield* and *Desert Storm* were both spectacular successes by any measure. The Soldiers, Sailors, Airmen and Marines who participated in Southwest Asia (SWA) deserve the full measure of praise and support provided by the American people. Our senior leadership, including President Bush and Secretary Cheney, also deserve praise for their resolute stewardship during the crisis.



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While the deployment and combat phases were extremely successful, we have not assumed that every weapon system and every aspect of our force performed flawlessly. We have thoroughly assessed our operations, and continue to review and implement remedial actions. The Marine Corps always endeavors to improve its warfighting capabilities and the lessons learned in SWA are a source that can be drawn upon. Lessons learned are considered in light of the many unique aspects of *Desert Shield/Desert Storm* that may never be exactly replicated.

The following chronology outlines Marine Corps participation in the Gulf crisis and underscores the lessons learned during this demanding contingency. It also highlights the capabilities that a series of Commandants of the Marine Corps have advertised as our special contributions to the Nation. The crisis in the Persian Gulf provided the opportunity for the Marine Corps to deliver on those promises.

Desert Shield

Operation *Desert Shield* began on 7 August 1990 with the President's order to initiate deployment of U.S. forces. The first Marines deployed that same day as part of the 2nd Air and Naval Gunfire Liaison Company (ANGLICO) assigned to the Army's 82nd Airborne Division ready brigade. They arrived at Dhahran airfield on 9 August. Within hours, other assigned Marine Corps forces began their deployment sequence. Ships from the Maritime Prepositioning Squadron-2 (MPS-2) home ported at Diego Garcia began movement immediately. Another squadron, MPS-3 from Guam, also weighed anchor the same day. Each squadron contains the equipment and supplies for a 16,000 Marine brigade for 30 days.

By 12 August, the 7th Marine Expeditionary Brigade (MEB) began its airflow aboard sorties provided by the Military Airlift Command (MAC). The ships arrived in Saudi Arabia on 15 August. Weapons and equipment poured out of the holds and roll-on/roll-off decks of the MPS ships at the docks in Al Jubayl.

The first Marines from 7th MEB arrived and had occupied defensive positions north of Jubayl by 20 August. The brigade completed its equipment depreservation quickly and was declared combat ready on 24 August. MPS-3 arrived on 26 August and completed its off-load on 4 September 1990. The Marines from the 1st MEB, stationed in Hawaii, began their airflow on 25 August.

Marine deployments were not limited to maritime prepositioning or the scarce strategic airlift of MAC. On 17 August, the 4th MEB embarked onboard amphibious ships from the East Coast. Furthermore, the 13th MEU(SOC) departed from the Philippines and headed towards the Gulf. It arrived in the Gulf of Oman on 7 September, and the 4th MEB arrived four days later. By the end of September, the Marine Corps had in SWA almost 50,000 Marines, 250 aircraft, 120 tanks, 70 Light Armored Vehicles (LAV's), and sufficient combat supplies for 30 days of fighting.



From 7 August 1990 until the start of the offense, the Marine Corps sent approximately 92,000 Marines to SWA. By 24 February 1991, this force included 24 infantry battalions, 19 fixed wing squadrons, and 21 helicopter squadrons. Adding the more than 24,000 Marines afloat in the Mediterranean and in the Western Pacific, which included an additional 6 infantry battalions and 6 fixed wing and 9 helicopter squadrons, about 90 percent of the operational forces of the Marine Corps were deployed simultaneously.

In the months preceding D-Day, Marine forces deploying to the Central Command (CENTCOM) area of responsibility had task-organized as Marine Forces Central Command (MARCENT) under the command of Lieutenant General Walter Boomer. It consisted of 1st and 2nd Marine Divisions, 3rd Marine Aircraft Wing (MAW), and 1st Force Service Support Group (FSSG), ashore in Saudi Arabia. Afloat Marine forces under the command of the Fleet Commander consisted of the 4th MEB, the 5th MEB, and the 13th MEU (SOC). The rapid buildup of the Marine forces validated the Marines' maritime prepositioning force concept. It allowed Marines to fall in on equipment from the three MPS squadrons, and provide the first credible ground defense capability in the area following the invasion of Kuwait. This also saved over 9,000 C-141 equivalent sorties.

On 15 January 1991, Marine forces were ready for imminent combat. The MARCENT command post had moved north to Safaniya and the 1st Marine Division (Major General Mike Myatt) was positioned in the northeast portion of the Marine area of responsibility. The 2nd Marine Division (Major General William Keys) occupied the north-west portion of the Marine zone. The 1st FSSG (Brigadier General James Brabham) with elements of the 2nd FSSG (Brigadier

KUWAIT

Kuwait Bay

Faylaka

Kuwait City

Al Jahrah

Al Jaber Airfield

Kuwait
International
Airport

Burgan
Oil Field

Persian Gulf

Al Khanjar

Al Wafrah

Khafji

Al Mish'ab

Kibrit

Safaniya

Manifah

SAUDI ARABIA



General Charles Krulak) was establishing forward supply bases at Al Mishab and Kibrit while continuing the offload at Al Jubayl. The 3rd MAW (Major General Royal Moore) supported I MEF, provided a 24 hour F/A-18 combat air patrol, and was moving its tactical air control facilities north to Al Mishab. The U.S. Army's 1st Brigade, 2nd Armored Division (the Tiger Brigade) had been assigned to the 2nd Marine Division.

Afloat the 4th MEB (Major General Harry Jenkins) had completed several amphibious exercises in Saudi Arabia, the United Arab Emirates and Oman. It was planning for Exercise *Sea Soldier IV* with the 5th MEB the last week of January.

The Early Phases of the Campaign

MARCENT began combat operations on 17 January 1991, with the 3rd MAW flying 144 combat missions in support of the CENTCOM strategic air campaign. Marine ground combat units continued to move north while remaining ready for possible Iraqi attack. Task Force Shepherd, (the 1st Light Armored Infantry (LAI) Battalion), continued its reconnaissance along the Kuwait border while other 1st Marine Division forces moved northward.

Marine aviation continued to strike targets. Early on the morning of 21 January, the First Marine Division began a series of artillery raids on enemy positions in Kuwait. These raids were designed to provoke an enemy reaction, with aerial observers, tactical air, and artillery ready to hammer the Iraqis when they came out of their fortified positions. These raids, which promoted deception, kept the Iraqis off balance and tested their response. The raids continued with significant success until the start of ground assault operations on 24 February.



Throughout January, Marine ground units moved north. On 26 January, the 2nd Marine Division began its own artillery raids. These raids were the 2nd Marine Division's first offensive action, as a Division, since World War II. Coalition forces repositioned as well, with the Joint Forces Command North to the west of the Marines and the Joint Forces Command East along the coastal main supply route leading into Kuwait.

Logistics is crucial to mobile warfare, particularly in the vast harsh desert. *Desert Storm* was no exception. In spite of the difficulties, logistics support was both exceptional and unique. This involved establishing supply points forward of MARCENT defensive positions before February to support the potential range of offensive operations being planned. This resulted in establishing a major Combat Service Support Area (CSSA) at Al Kibrit. This was a gamble, because it placed the CSSA forward of most Marine forces. In fact, the only friendly forces north of Al Kibrit were screening elements from Marine and Arab coalition forces. Construction on Al Kibrit began on 28 December, and by 4 February it was fully stocked with seven days' worth of supply.

Gearing up to meet the timetable for an attack inside Kuwait required two weeks of round-the-clock work. From a well and an old dirt airstrip in the middle of a trackless patch of sand, the Force Service Support Groups:

- Established a 470-bed hospital with 9 operating rooms.
- Stocked and issued one million meals.
- Received and stocked 15,800 tons of ammo.
- Operated wells producing 80,000 gallons of water a day.
- Constructed a 40,000-man EPW compound.
- Established a 1.8 million-gallon fuel dump.
- Drove over 578,000 miles.
 - - Delivered 42,000 tons of cargo.
 - - Delivered 4.4 million gallons of fuel and 2 million gallons of water.

These hectic days made the dramatic drive to Kuwait City possible. It was also a Total Force effort since the Reserves provided their skills and sweat alongside their active duty partners and the Navy "Seabees" added their muscle and considerable engineering skills. Logistics was in many ways *the* crucial element in *Desert Storm*.

On 29 January, the Iraqis penetrated the Saudi Arabian border at three locations: north of Ras Al Khafji; east of Wafrah; and at the "heel". The force consisted of over 1500 Iraqis and 50 tanks. The latter two incursions were repulsed by a combination of A-10's, Marine Cobra gunships, Marine artillery, and LAV's. An Iraqi task force conducted the attack in the east with the forward elements entering the town of Khafji. Units of the 1st Surveillance Reconnaissance Intelligence Group (SRIG), and reconnaissance elements from the 3rd Marines, supported a Saudi/Qatari counterattack on Khafji. They played a significant role, spotting targets and adjusting

fire for U.S. and Coalition artillery and controlling air strikes throughout the battle. By the afternoon of 30 January, friendly forces cleared Khafji, collected 500 prisoners, and moved north of the town.

In early February, the Commanding General of the 2nd Marine Division proposed expanding the breach through Iraq's minefields with two separate lines of attack. The previous plan had been for 1st Marine Division to make the actual breach operations and have the 2nd Marine Division prepared to exploit the opening. On 6 February, General Boomer approved the change in plans. This reduced the risk for enemy counterattack or artillery force during the difficult, and possibly congested, breaching operation.



This change shifted the focus of the 2nd Marine Division's attack many miles to the west from Al Kibrit and required a massive realignment in logistics support. A new logistics base was identified 130 kilometers west of Kibrit which was dubbed "Al Khanjar" or "The Dagger." The 1st FSSG geared up its famed "Baghdad Express" of 1,000 civilian tractor trailers loaned by Arab allies and crewed mainly by Reserve Marines of the 6th Motor Transport Battalion. Without the around-the-clock service by these Reserve Marines, the ground attack would not have been able to maintain its drive to Kuwait. Among the major activities the FSSGs conducted following the establishment of CSSA Khanjar were:

- Developed a well site to produce 100,000 gallons of potable water a day.
- Constructed a water storage capacity for 790,000 gallons.
- Constructed a 4.8 million-gallon fuel farm in 10 days.
- Constructed 500 foxholes and stocked 3 days of ammunition at a 768 acre Ammo Supply Point.
- Dug 300 foxholes within 24 hours.
- Built 26 miles of road between Khanjar and Kuwait.
- Collected and transported 20,676 prisoners.
- Drove 655,000 miles carrying 53,000 tons of cargo and 2,000,000 gallons of water and 2,000,000 gallons of fuel.

Marine units began probing and infiltrating the obstacle belts to their front. The berm paralleling the Saudi-Kuwait border was cut in numerous locations in anticipation of the impending assault. Deception measures were continued to conceal the actual point of main effort. Marines infiltrated enemy lines, probing for gaps in the defensive positions and minefields.

The odds against MARCENT were formidable. The Iraqis had 8 infantry divisions with 887 armor vehicles, 352 armored personnel carriers and 864 artillery pieces. Their reserves in southeast Kuwait included another 1385 tanks, 1313 armored personnel carriers (APC's) and another 432 artillery weapons.

In keeping with the Marine Air Ground Task Force concept, MARCENT was task organized to conduct a powerful combined arms attack against its opponent. MARCENT had 525 tanks (including the Tiger Brigade), 780 APC's and LAV's, and 215 artillery pieces including 10 Multiple Launch Rocket Systems (MLRS's) provided by the Army. In addition, Marine tactical aviation included 222 fixed wing aircraft and 192 helicopters.

The Battle Begins

G-Day, the designation for the start of the assault, was 24 February 1991. MARCENT spearheaded the supporting ground attack for the Coalition Forces. Both the 1st and 2nd Marine Divisions breached the Iraqis' obstacle belts and penetrated deep into Kuwait. The 1st Marine Division led the attack at 0400 local time, penetrating the first and second Iraqi obstacle belts against moderate Iraqi resistance. The 2nd Marine Division attacked and also quickly penetrated the first and second obstacle belts with little Iraqi response.

Task Force Shepherd, the 1st LAI Battalion, provided screening operations in the Al Wafrah and Al Burqan oil fields for the 1st Marine Division. It engaged enemy tanks south of the Al Jaber Airfield. Other 1st Marine Division units breached the obstacle belts and captured MARCENT Objective "A", the Al Jaber Airfield. The advance met with sporadic enemy fire, both direct fire from tanks and from Iraqi artillery, as well as numerous violent skirmishes. Conditions included the mix of incoming fire, the confusion of the thick gloomy smoke generated by burning oil wells, and the thousands of Iraqi enemy prisoners of war streaming southward. Battle damage assessment for the day included 21 enemy tanks destroyed and over 4000 Iraqis captured.

The 2nd LAI Battalion provided a screen for lead elements of the 2nd Marine Division. Once through the obstacle belts, they temporarily stopped to defend against a reported enemy armored column moving out of Kuwait City. This column was defeated by a combination of ground and air delivered weapons. The Division continued the attack, capturing an intact enemy tank battalion with 35 T-55 tanks, and over 5000 prisoners by day's end.

The 3rd MAW flew 671 sorties in support of MARCENT on G-Day. It made strikes against 6 Iraqi divisions, and destroyed 40 tanks, 3 armored personnel carriers, 18 trucks, 102 miscellaneous vehicles, 3 anti-aircraft sites, and 4 missile sites.

During the day, CENTCOM recognized that the Marines were slicing through the Iraqi minefields and defensive positions. It was also clear that our amphibious feints had served their purpose. The Iraqis were on the run and General Schwarzkopf then ordered that the main attack by VII Corps, a sweeping flank assault, be moved up a day. As the ground assault continued, the 5th MEB, afloat in the Gulf, began to disembark additional ground forces ashore, as the MARCENT Reserve.



The Second Day

On 25 February, the second day of combat, MARCENT continued its attack in the face of moderate resistance. The 1st Marine Division began the day forward of the Burqan oil field. In response to a division artillery fire mission on suspected enemy assembly areas, enemy armor boiled out. A close quarters battle ensued. At the end of the day, the Division consolidated and cleared the last of the enemy from the Al Jaber Airfield. With minimal casualties and equipment losses, the 1st Marine Division had destroyed 80 enemy tanks, and had captured more than 2000 enemy prisoners with more surrendering each hour.

The 2nd Marine Division began the day south of Al Abdallya. It attacked north toward a hard surface road grid nicknamed the "ice cube tray". Following artillery fires, scores of enemy prisoners began streaming toward Division lines. 248 enemy tanks were destroyed and 4500 enemy prisoners were captured. The 3rd MAW flew over 460 sorties that same day, destroying 52 tanks, 9 armored personnel carriers, 6 artillery tubes, and additional anti-aircraft missiles sites.



The day's success was another Total Force success giving credence to the Marine Corps training efforts, integration plans, and interoperability. Our Reserves performed well. Perhaps the best example of effectiveness of this is found in Company B of the 4th Tank Battalion, from Yakima, Washington. This unit had been equipped with M60A1 tanks, a system that is far different than the more modern M1A1. After this unit was activated in November, it completed a 23-day M1A1 training program in just 18 days. The unit arrived in Saudi Arabia on 19 February and went into battle on 24 February. In four engagements during the course of the war Company B destroyed 59 enemy tanks, about half of which were T-72's.

The Battle Continues

On 26 February, the third day of offensive ground combat operations, MARCENT advanced in the face of moderate resistance. The 1st Marine Division's objective (Objective "C") was the Kuwait International Airport. The final assault on the objective began late in the day. Despite armored resistance, they continued forward until enemy forces surrendered northwest of the airport. In seizing the airport, the 1st Marine Division destroyed 250 T-55/62 tanks and over 70 T-72 tanks.

The 2nd Marine Division advanced to the city of Al Jahra, with moderate opposition. By late afternoon, it had secured the objective and continued through to secure the high ground known as Mutla Ridge, northwest of Al Jahra, blocking the Iraqi escape route north to Basra.

The Final Days

On 27 February, the fourth day of ground combat operations, MARCENT continued its advance. The 1st Marine Division completed securing Kuwait International Airport by early morning. They also coordinated passage of lines for the Arab forces to enter Kuwait City. The 2nd Marine Division remained in the vicinity of Al Jahra in blocking positions, to include Mutla Ridge, and began clearing its zone.

Upon entry into Kuwait City, the Marines discovered an enormous sand table in a Kuwait school adjacent to the embassy. The sand table showed the extensive Iraqi defensive fortifications prepared in anticipation of an amphibious assault by U.S. Marines. The fortifications, including bunkers, obstacles, and minefields, were confirmed by the numerous observers, who reported that the beach fortifications in and around Kuwait City were indeed extensive and formidable. The numerous amphibious exercises conducted by the 4th and 5th MEB's had served their strategic purpose.



On 28 February, offensive operations ceased at 8 o'clock that morning. A preliminary statistical review provided by MARCENT for the 100 hours of ground combat indicated that U.S. Marines had destroyed or captured 1040 enemy tanks, destroyed or captured 608 enemy armored personnel carriers, destroyed 432 enemy artillery pieces, and had control over 20,000 enemy prisoners of war. MARCENT's overall success must also be shared with the 16,000 Marines and 467 aircraft of 3rd MAW. The 3rd MAW successfully operated from 6 major and 4 minor expeditionary airfields, conducted 18,000 sorties during the campaign, delivering almost 30 million pounds of ordnance and 20 million pounds of cargo.

Conclusions

Overall, *Desert Storm* was an unparalleled success and a tribute to the efforts of many military professionals over the past several years. The Marines were given a difficult challenge to overcome in the face of the extensive battlefield obstacles and minefields constructed by the Iraqis. Later, General Schwarzkopf would lavish accolades on the Marine breaching operations, stating that military professionals would study these “classic operations for years to come.” Many lessons were learned from our operations. These are summarized in Figure 3-1.

Desert Storm demonstrated in an unmistakable way the effectiveness of joint and combined military operations. Each of the U.S. military services has unique capabilities which should be fully exploited during specific phases of combat operations. Combined, these provide the synergistic combat power which *enables* the full power of the U.S. military against an opponent. Where the opportunity exists, the most efficient means to conduct combat operations is with the combined mass and force of the joint services, and with allied support.

Operation *Desert Shield/Storm* was the first true test of Maritime Prepositioning. MPS was designed to provide sustainable combat power anywhere in the world within a few days. It did exactly that. The first MPS squadron arrived in Saudi seven days after it left its home port. The MPS ships supplied Marines and advance elements of the other Services until their supplies arrived in theater. In all, we deployed three MPS squadrons without a flaw.

Marine contributions to the Nation's security objectives were not limited to the Persian Gulf. As the Secretary of the Navy, H. Lawrence Garrett III has stated “No year in recent memory has better illustrated the dividend sea forces pay the American people.” *Desert Shield/Storm*, the evacuation operations in Liberia and Somalia and the relief efforts in northern Iraq and Bangladesh are the latest examples of the flexibility of the Navy-Marine Corps team. These incidents indicate how true the Marine Corps has remained to the intent of Congress and the needs of the nation.

Throughout *Desert Shield/Storm* the Marine Corps proved that it could handle a variety of different missions. Although we did not make a major amphibious assault, the presence of the 4th and 5th MEB's and the demonstrations they put on were enough to tie down six to seven Iraqi divisions. The Marine Corps proved, by spearheading the assault into Kuwait, that it could operate extremely well on today's fast paced battlefield. Operation *Desert Storm* was the first actual test of the Marine Corps' doctrine of maneuver warfare. It proved that the Marine Corps, with modern weapons, realistic training and a few good men and women, can decisively prevail over a numerically superior enemy through maneuver warfare.

The success on the ground would not have been possible if it were not for the other half of the Marine Corps combined arms team — Marine Air. Marine Air provided invaluable close air support for the ground forces, as well as missions in support of the overall

FIGURE 3-1:

Lessons Learned from Desert Shield/Storm

- ★ **Technology matters, but people matter more.** Although American weapons and technology garnered well earned kudos, these marvels would not have been effective without the motivated men and women that operated them.
- ★ **Joint operations generate the greatest combat power possible by combining the unique characteristics of each Service.**
- ★ **Maritime Prepositioning may end up as the single greatest success story of the Reagan Defense Plan.** These forces, including the TAV-B aviation maintenance ships, provided the most rapid and credible forces in theater.
- ★ ***The flexibility of naval forces.*** Carrier battle groups were the first U.S. presence. Surface groups operated the maritime interdiction force which sealed off Iraq. Amphibious forces provided strategic deception and raiding capabilities to keep the Iraqis tied down to the coast. Strategic mobility assets brought the forces and their supplies together over 8700 miles of ocean. Finally, power projection forces provided ground combat, naval gunfire, tactical air, and sea-launched cruise missiles to the fight.
- ★ ***Intelligence.*** Today's commanders operate in a complex cycle of information exchange and rapid decision making. They require current intelligence. Our forces require tactical reconnaissance capabilities, particularly photographic recon and imagery, that can be rapidly acquired and disseminated.
- ★ ***Doctrinal Training and Education.*** Marine forces were thoroughly indoctrinated in the tenets of maneuver warfare, with its emphasis on rapid and violent action and high rates of operational tempo to overcome the quantitative advantages of potential adversaries. Our investments in training and education paid off.
- ★ **Lastly, the Total Force policy worked.** Our Reserves were ready and highly motivated. They quickly integrated with their active component partners, and in some cases outshined them!

campaign effort. The Marine Corps team integrated its F/A-18's, Harriers, and Cobra gunships into a coordinated plan of attack that provided the MAGTF commander with a decisive force.

Desert Storm has clearly proven the efficacy of the Marine Corps' Total Force Policy. The Reserves served alongside their active duty counterparts in SWA. Not only were the Reserves fully integrated in the initial breach and close quarters battles in Kuwait, they also maintained ready contingency forces in Okinawa, the Philippines and in CONUS. For example, the Reserve conducted Exercise *Battle Griffin* in Norway during March and Exercise *Ahuas Tara* in Honduras in April. We could not have done all this without the Reserves.

In summary, the Marine Corps deployed the first credible force to the Middle East, with heavy armored and mechanized units, along with its own supporting aviation. We were and are capable of staying for extended periods due to our adherence to sea-based logistics. The MPS concept is now a proven premier national asset. We have again demonstrated the utility of the MAGTF by organizing a tailored force from our *reservoir of combat forces*. Above all, the Marines fulfilled the promises the Corps has made to our national leadership, the Congress, and the American taxpayer.



CHAPTER FOUR

MAJOR PROGRAMS FOR IMPROVED MAGTF CAPABILITIES

This chapter provides background information regarding specific key programs being pursued by the Marine Corps, or acquired by the Navy, to enhance the overall capabilities of the MAGTF. These programs represent a very modest cost to retain and enhance the existing flexibility and capabilities of our expeditionary forces for the projected security environment.





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LIGHT ARMORED VEHICLE – AIR DEFENSE (LAV-AD) PROGRAM

DESCRIPTION: The LAV-AD is being developed as a member of the LAV family of vehicles. The LAV family is a series of wheeled, light armored vehicles that provide significant improvements in firepower and tactical mobility for combat units. All vehicle configurations have the same power plant, drive train, steering assemblies and similar ballistic hulls.

The LAV-AD is a ground-based, low altitude, anti-aircraft weapon platform featuring a stabilized turret with a shoot-on-the-move capability mounted in an LAV chassis. The system will integrate a rapid fire 25mm automatic gun and Stinger surface-to-air missiles. The LAV-AD fire control system will consist of a forward-looking infrared (FLIR) sight, a laser rangefinder, a contrast autotracker, and a fire control computer.

PROCUREMENT PROFILE: FY-93

Quantity: N/A

OPERATIONAL IMPACT: The mission of the LAV-AD is to defend maneuvering Marine Corps combat forces from air attack and provide ground defenses against lightly armored mechanized forces. The proliferation of sophisticated air assets throughout the world requires that rapidly moving light armored elements of the MAGTF be able to defend themselves against air attack.

PROGRAM STATUS: The LAV-AD program is in Full Scale Development (FSD) with two contractors developing and integrating two prototype turrets into an LAV chassis. By the end of the 2nd Quarter FY-92, one contractor will be selected to complete development and undergo operational testing. A production decision is planned for December 1993.

DEVELOPER/MANUFACTURER: General Electric and FMC in FSD.

LAV-AD (General Electric)



LAV-AD (FMC Version)



MULTIPLE LAUNCH ROCKET SYSTEM

DESCRIPTION: The Multiple Launch Rocket System (MLRS) is a surface-to-surface, fully tracked, rapid fire, free-flight rocket system. The MLRS incorporates self-location, directional pointing with out-board ballistic computer, and digital communications in one piece of equipment. The system consists of the carrier vehicle, which is an elongated version of the Bradley fighting vehicle, and the launcher loader module. The system weighs 54,600 pounds, can climb sixty percent slopes, ford 40 inches of water, has a cruising range of 300 miles, can be transported by C-141 (or larger aircraft) and fires submunition rockets from 10 to 30 kilometers. MLRS will complement the Marine Corps' existing artillery structure and doctrine and provide the MAGTF commander with decisive fire support.

PROCUREMENT PROFILE: FY-93

Quantity: N/A

OPERATIONAL IMPACT: The Multiple Launch Rocket System represents an expeditionary all-weather fire support capability which is highly maneuverable and capable of providing decisive long-range support. The roles of long-range interdiction, SEAD (Suppression of Enemy Air Defense System), and counterfire are appropriate for MLRS.

PROGRAM STATUS: The U.S. Army fielded the MLRS in 1981 and employed it in the recent war with Iraq with a great deal of success. The United Kingdom, France, Italy and Federal Republic of Germany have also fielded the MLRS as part of a combined development program. The MLRS is a mature nondevelopmental item (NDI) program presently being examined for procurement by the Marine Corps.

DEVELOPER/MANUFACTURER: LTV Aerospace and Defense Company.



JAVELIN (FORMERLY AAWS-M)

DESCRIPTION: The Javelin is a medium-range, man-portable, "fire and forget" weapon system which will replace the Dragon anti-armor missile system. Javelin will satisfy an operational requirement to provide increased reliability, higher hit/kill probability, and greater effective range (2000m +) against current and future armored threats. Javelin uses an infrared, fire-and-forget seeker coupled with an advanced warhead and top attack missile trajectory to provide higher hit/kill probability. It can be fired from fighting positions and enclosures which makes it an effective system for employment in urban terrain.

PROCUREMENT PROFILE: FY-93

Quantity: N/A

OPERATIONAL IMPACT: The Marine Corps has a continuing urgent requirement for a man-portable, anti-armor weapon system capable of engaging and defeating the enemy armor threat. The current man-portable, medium anti-tank weapon system, the Dragon, is not effective against the improved conventional and reactive armor on existing threat vehicles. The TOW, our heavy anti-armor weapon, is not man-portable.

PROGRAM STATUS: The Army and the Marine Corps are jointly participating in the development of the Javelin with the Army as the lead service. The program is currently in Engineering and Manufacturing Development with an expected Operational Test Evaluation in FY-93. The Marine Initial Operating Capability (IOC) will not occur until FY-97.

DEVELOPER/MANUFACTURER: Texas Instruments and Martin Marietta.



ADVANCED AMPHIBIOUS ASSAULT (AAA) PROGRAM

DESCRIPTION: The goal of the AAA Program is to provide the Marine Corps with an Over-the-Horizon (OTH), forcible entry, amphibious assault capability that replaces the AAV-7A1. The product of the AAA Program will complement the Landing Craft Air Cushion (LCAC) and medium-lift assault aircraft in improving amphibious lift and tactical mobility to the MAGTF.

PROCUREMENT PROFILE: TBD

OPERATIONAL IMPACT: The AAA will satisfy multiple mission area needs by providing the mobility, firepower, and armor protection to embarked personnel during the ship-to-shore portion of the amphibious assault as well as subsequent operations ashore. Threat advances in capability require the continuous application of technology to improve the tactical mobility of Marine expeditionary forces. The AAA's inherent characteristics allow the uninterrupted movement of the surface assault forces from ships over the horizon to inland objectives. Its speed, on land and in the water, firepower, and armor protection will permit forcible entry of Marine expeditionary forces.

PROGRAM STATUS: The AAA Program was approved by the Defense Acquisition Board as a major new start during October 1989. The program is currently exploring the various alternatives that may fulfill future amphibious assault requirements. The result will provide the Marine Corps of the 21st century with dramatic improvements for amphibious assault and tactical mobility of expeditionary forces.

DEVELOPER/MANUFACTURER: TBD



NUCLEAR, BIOLOGICAL AND CHEMICAL (NBC) DEFENSE PROGRAM HIGHLIGHTS

DESCRIPTION: The Marine Corps is pursuing a number of enhancements that will increase the effectiveness of MAGTFs within an NBC environment. As seen by developments in the Third World over the past decade, there is a proliferation of chemical and biological agents in use. Our forces must be able to defend themselves and continue to operate within this environment. Several ongoing efforts are listed below.

PROCUREMENT PROFILE:	FY-93
M40 Field Protect Mask with Canister	25,055
M40 Second Skin	23,333
Chemical Agent Monitor (CAM)	123
Individual Chemical Agent Monitor (ICAD)	0
Portable Collective Protection System (PCPS)	318
M21 Remote Sensing Chemical Agent Alarm (RSCAAL)	0
Chemical/Biological Protective Suit, Saratoga	0
Skin Decon Kit, M291	39,000
Mask Communication Adapter	0
Green Vinyl Overshoe (GVO)	49,451
Lightweight Decon System (LDS)	138
M11 "Stretch" Decon Apparatus	4,000

OPERATIONAL IMPACT: The equipment being fielded will support rapid decontamination allowing Marine units to continue to fight. New NBC protective overgarment suits will provide less heat stress in hot climates. This is particularly desirable given our experience in South-west Asia. All equipment is more easily maintained and more reliable than the equipment replaced. Marines must have the capability to conduct extended operations in an NBC environment.

DEVELOPER/MANUFACTURER:
Principal Design Activity:
Chemical Research, Development
and Engineering Center
(CRDEC), Natick RD&E Center.



GROUND AMMUNITION PROGRAM

DESCRIPTION: The Marine Corps's FY-93 ground ammunition budget includes significant requirements needed to train and sustain our combat forces in the Fleet Marine Force. One significant program which pays huge dividends is the Ammunition Modernization program. This program has saved the Marine Corps millions of dollars over the years by modernizing existing inventory in lieu of procuring new quantities of ammunition at a disproportionately higher cost. As an example, we are implementing an improvement program to our existing inventory of M913 and ML25 Linear Demolition Charges. The breakdown of our FY-93 ammunition program follows:

ITEM	FUNDING REQUEST (\$ MILLIONS)
Artillery	0.0
Tank (M1A1)	0.0
Mortar	27.5
Small Arms	32.6
Heavy MG (.50 Cal / 25mm / 40mm)	48.1
Other *	<u>25.7</u>
Total	133.9

* Includes pyrotechnics, grenades, rockets, etc . . .



STINGER NIGHT SIGHT

DESCRIPTION: The Stinger Night Sight is a lightweight, battery-powered device that is easily attachable and detachable to the Stinger weapon round. The sight contains a wide field of view with the Stinger missile sight reticle inserted in order for the gunner to perform the necessary lead angle and elevation to engage hostile targets. There are currently two on-going Stinger Night Sight programs. The first is an interim solution sight utilizing Generation III image intensification which was produced and fielded to support Operation *Desert Storm*. The formal Stinger Night Sight program utilizes thermal imagery to acquire and track hostile aircraft.

PROCUREMENT PROFILE: FY-93

Interim Solution: 0

Formal Program: 225

OPERATIONAL IMPACT: The Stinger Night Sight will fill a void that has existed for years within Low Altitude Air Defense, (i.e.: the capability to detect, acquire, track and engage unlighted tactical aircraft at night). The formal night sight program will also provide the Stinger gunner the capability to engage targets during periods of reduced visibility.

PROGRAM STATUS: Fielding of the interim Stinger Night Sight in limited quantities is complete. The formal Stinger Night Sight program completed Technical Evaluations of its pre-production model Wide Angle Stinger Pointer during 1st Quarter FY-92 and is scheduled for a review to enter into low rate production during 2nd Quarter FY-92. Pending approval of low rate production, initial production sights will undergo an Independent Operational Test and Evaluation by the Fleet Marine Forces prior to entering into full rate production. The Marine Corps is currently looking at further improvements to the baseline system to increase resolution, decrease weight and add a digital compass. IOC for the formal sight is planned for 4th Quarter FY-92.

DEVELOPER/MANUFACTURER:

Interim Solution Developer — MCRDAC/Manufacturer — ITT Electro
Optics, Roanoke, Virginia

Formal Sight Developer – MCRDAC/Manufacturer – Magnavox,
Mahwah, NJ.

PEDESTAL MOUNTED STINGER (PMS)

DESCRIPTION: Pedestal Mounted Stinger (PMS) consists of a fire control unit module which includes a rotatable turret with two missile launching platforms (each containing four ready-to-fire Stinger missiles), a .50 cal machine gun, and a gunner's station mounted on a HMMWV. The system incorporates a FLIR sensor to provide for day/night and adverse weather target tracking. The laser range finder provides target range for the gun solution, and ensures missile engagements are conducted within the missile envelope. An operator's display and controls provide the man-machine interface to control engagements, monitor system status, and receive, display and transmit information. A remote control unit allows operation of the system up to 50 meters from the system, enhancing crew survivability in a static employment.

PROCUREMENT PROFILE: FY-93

Quantity: 26

OPERATIONAL IMPACT: PMS will fulfill the requirement for a mobile, low altitude, air defense system capable of rapid deployment and 24-hour operations. It will improve engagement time, increase firepower, reduce displacement time, and provide a night engagement capability. Its shoot-on-the-move capability will add a new dimension to short-range air defense.

PROGRAM STATUS: PMS is currently in production for the U.S. Army as an NDI system. The Marine Corps participated in R&D with the Army and testing was completed with successful results. An IOC of FY-93 is planned.

DEVELOPER/MANUFACTURER: Boeing Aerospace Corporation



MEDIUM LIFT REPLACEMENT (MLR) AIRCRAFT

DESCRIPTION: The MLR is the program name which has been given to the aircraft which will replace the Corps' aging CH-46E and CH-53D force. The exact type aircraft is undetermined. The Secretary of Defense has directed the development of the necessary replacement aircraft. A Cost and Operational Effectiveness Analysis was conducted to evaluate all reasonable alternatives including, but not limited to, the CH-53E, BV-360, EH-101, CH-46E, and CH-60 aircraft, or any combination thereof. The Institute for Defense Analysis (IDA) completed and forwarded the analysis to the Secretary of Defense in June 1990. The Marine Corps completed an MLR Operational Requirement Document (ORD) in December 1991.

PROCUREMENT PROFILE: TDB

OPERATIONAL IMPACT: The MLR will be the backbone of the Corps' assault support force as it enters the 21st century. It will provide the MAGTF with an assault support aircraft with the speed, endurance, and battlefield survivability needed to fight and win on tomorrow's battlefield. It will represent a significant improvement in tactical capability and will replace our current force of CH-46E's and CH-53A/D's. A replacement for this critical component of our air-ground fighting force is our highest priority.

PROGRAM STATUS: Efforts are underway to satisfy the requirements of this vital mission need.



Our number one priority is the replacement of the aging medium-lift assault fleet.

AV-8B HARRIER

DESCRIPTION: The AV-8B is a single seat, transonic, vectored thrust, light attack aircraft, capable of increased payloads, range, endurance, and improved reliability and maintainability over the AV-8A. The Vertical/Short Take Off and Landing (V/STOL) design gives it the capability to operate from a variety of land- and sea-based air facilities. It is configured with the Angle Rate Bombing System (ARBS) which provides an extremely accurate first pass attack capability and high kill probability through the use of passive laser spot or TV tracking. The last 24 aircraft to be delivered under the current contract will be fitted with the APG-65 radar in addition to the night attack capability now being installed.

PROCUREMENT PROFILE: FY-93

Quantity:

N/A

OPERATIONAL IMPACT: An expeditionary force like a MAGTF has limited assets of organic heavy artillery and tanks, relying instead on its aviation assets to provide the required fire support. The V/STOL capability of the AV-8B is well suited for providing dedicated close air support to Marine ground forces. The AV-8B offers a quantum leap forward in basing options. It can operate from ships as small as a LPH, from rapidly built expeditionary airfields, from forward sites like roads and even from damaged conventional airfields. The addition of night attack and radar allows the AV-8B to be even more responsive to the ground commander's needs.

PROGRAM STATUS: The AV-8B is intended to remain in service until the introduction of the replacement aircraft in approximately 2010. The Department of the Navy is looking at several options to sustain the AV-8B inventory including additional procurement or remanufacture. This would involve incorporation of various safety improvements, service life renewal and incorporation of radar and night attack capability into all of our existing inventory.

DEVELOPER/MANUFACTURER: McDonnell Douglas.



F/A-18 "HORNET"

DESCRIPTION: The F/A-18 is a twin-engine, supersonic strike fighter aircraft. The Hornet fulfills both air-to-air and air-to-ground mission requirements and can be operated from conventional and expeditionary airfields or from aircraft carriers. The F/A-18 incorporates state-of-the-art technology such as digital fly-by-wire flight controls, multi-mode radar and lightweight composites. F/A-18C's delivered in FY-90 and future years will incorporate an increased night and marginal-weather capability, which includes a color digital moving map display, Night Vision Goggle-compatible lighting, and Forward-Looking Infrared (FLIR) sensors. A two-seat version, the F/A-18D, incorporates all the warfighting capabilities of the F/A-18C and will include a tactical reconnaissance capability.

PROCUREMENT PROFILE: FY-93

Quantity: DON/USMC 48

(* USMC share of new aircraft varies based on transition schedules)

OPERATIONAL IMPACT: The F/A-18 provides a modern multi-mission offensive and anti-air capability to the MAGTF. The F/A-18D will replace the RF-4B, OA-4/TA-4, and A-6E. The F/A-18D provides the MAGTF with a platform capable of tactical reconnaissance and tactical air control while retaining the offensive and defensive anti-air capabilities of the F/A-18A/C. Advanced avionics allow the pilot to navigate accurately, to strike or image enemy ground targets, and to destroy enemy aircraft. It's maintainability and multi-mission capability make it particularly well-suited to the needs of the MAGTF in an austere expeditionary environment.

PROGRAM STATUS: The second F/A-18D squadron stood up during FY-91 and the third will stand up during FY-92. A third Reserve F-4 squadron will transition to the F/A-18A in FY-92.

DEVELOPER/MANUFACTURER: McDonnell Douglas



ADVANCED TACTICAL AIR RECONNAISSANCE SYSTEM (ATARS)

DESCRIPTION: The Advanced Tactical Air Reconnaissance System (ATARS) is a digital sensor suite designed to provide near real-time tactical intelligence. The ATARS suite will be comprised of low- to medium-altitude electro-optical sensors, an infrared sensor, tape recorders, and data link. The ATARS will be carried on the reconnaissance capable F/A-18D.

PROCUREMENT PROFILE: FY-93

Quantity: 15

OPERATIONAL IMPACT: Timely, accurate intelligence is vital to a MAGTF commander. Since the MAGTF may be operating independently without access to other tactical, theater or national intelligence gathering assets, it requires an organic tactical air reconnaissance capability. The ATARS mounted on the medium-range UAV and the F/A-18D will allow day and night near real-time intelligence to be provided to the MAGTF commander. The F/A-18D equipped with ATARS provides the capability to accomplish reconnaissance taskings without dedicating an airframe solely to the reconnaissance mission. The Hornet, with ATARS, will still retain all its capabilities as a superior strike fighter, with the exception of the nose gun which will be removed for installation of ATARS during reconnaissance missions. ATARS digital imagery sensors significantly reduce the support required over that required by film systems that increase logistical and manpower burdens on the MAGTF.

PROGRAM STATUS: The ATARS program funding is on track and provides for a total of 31 systems. IOC is scheduled for FY-95.

DEVELOPER/MANUFACTURER: Martin Marietta Corporation.

CH-53E “SUPER STALLION”

DESCRIPTION: This 3-engine, heavy-lift helicopter is designed to lift 16 tons over a 50 nautical mile (NM) combat radius. It has a seven blade, 79-foot diameter main rotor head and a canted 20-foot diameter tail rotor. This shipboard-compatible assault support helicopter is employed for the movement of internal cargo, the recovery of tactical aircraft, and the external lifting of weapons and equipment.

PROCUREMENT PROFILE: FY-93

Quantity: 16

OPERATIONAL IMPACT: The CH-53E is the Marine Corps' only heavy lift support helicopter. The CH-53E, along with the MLR and the LCAC, forms the cornerstone of an assault support force required for the tactical movement of heavy weapons and equipment during over-the-horizon amphibious assaults, subsequent operations ashore, or during expeditionary operations. The CH-53E provides the ground combat commander the operational flexibility to reposition artillery and LAV's, recover heavy equipment and aircraft, and deliver supplies and fuel to forward sites. The ability to self-deploy by use of air refueling enhances its deployment capability in support of expeditionary operations.

PROGRAM STATUS: Additional procurement will be required to meet the Marine Corps' heavy lift requirement of six operational squadrons of 16 CH-53E's.

DEVELOPER/MANUFACTURER: Sikorsky Aircraft.



AH-1W "SUPER COBRA"

DESCRIPTION: The AH-1W is a multi-mission, two-place (pilot and gunner/copilot), twin-engine attack helicopter capable of land or sea-based operations. Its mission is to provide close-in fire support and fire support coordination under day/night and adverse weather conditions. Additional mission tasks include: armed escort for assault transport helicopters, point target/anti-armor operations, anti-helicopter operations, and armed and visual reconnaissance. The AH-1W has a turreted 20mm gun and is capable of firing rockets and a wide variety of precision guided weapons, to include: TOW/HELLFIRE (anti-armor), SIDEWINDER (anti-air), and SIDEARM (anti-radar). The AH-1W Night Targeting System will incorporate a FLIR, video camera, automatic target tracking, and laser range finder/designator to provide night/adverse weather TOW and HELLFIRE capability.

PROCUREMENT PROFILE: FY-93

Quantity: 12 *

(* Does not include National Guard and Reserve Equipment-funded aircraft)

OPERATIONAL IMPACT: The AH-1W is the Marine Corps' only attack helicopter. The multi-mission versatility of the Super Cobra provides the MAGTF commander with a significant force multiplier in both offensive and defensive ground combat. Improved night attack capability provided by the Night Targeting System is critical for round-the-clock, close-in fire support.

PROGRAM STATUS: In addition to AH-1W new procurement, 42 AH-1T's have been funded for conversion to AH-1W. This will bring total funded inventory to 120 AH-1W's to support seven active duty squadrons including one training squadron. Additional procurement is required to meet the Marine Corps' minimum attack requirement for the active/reserve squadrons plus training.

DEVELOPER/MANUFACTURER: Bell Helicopter Textron.



UNMANNED AIR VEHICLE (UAV)

DESCRIPTION: This program enhances the Marine Corps' ability to meet requirements to provide target acquisition, battlefield surveillance, reconnaissance, radio relay, and Communications Electronic Countermeasures (CECM) capability in support of the MAGTF. The Marine Corps is operating the Pioneer Remotely Piloted Vehicle (RPV) System as an interim surveillance and target acquisition system. A Pioneer RPV System is comprised of eight air vehicles, associated payload packages, a ground control station (GCS), a portable control station (PCS), and two remote receiving stations and launch/recovery subsystems. The Marine Corps has requirements for all four categories of UAV's; Short Range, Close Range, Medium Range, and Endurance.

PROCUREMENT PROFILE: FY-93

Quantity: N/A

OPERATIONAL IMPACT: The MAGTF commander requires timely intelligence and surveillance of the enemy situation. The Marine Corps has a long standing interest in developing a UAV capability for unmanned aerial target acquisition, surveillance, reconnaissance, radio relay, and communications electronic countermeasures. The UAV provides those capabilities in high threat scenarios where the use of expensive manned aircraft and highly trained crew members may be imprudent.

PROGRAM STATUS: UAV system research and development was assumed by the Joint UAV Program Office in FY-88. A contract was let for two prototype short range systems in September 1989. After testing, the winning contractor will produce 18 systems for the Marine Corps. A contract was let for the medium-range version in June 1989, with deliveries to the Marine Corps starting in 3rd Quarter, FY-96.



MARINE TACTICAL COMMAND AND CONTROL SYSTEM (MTACCS)

DESCRIPTION: MTACCS is both a concept and a system that will provide MAGTF commanders the capability to receive, process, filter, and display data so that it is presented as usable information for tactical decision making. It is a comprehensive automated tactical system that will consist of a common family of hardware, standard operating system and operational and functional software developed to common standards. The system will also provide connectivity to the digital communications "backbone" of the Marine Corps. MTACCS is the umbrella concept that will pull together all of the disparate functional areas of the battlefield. The component systems of MTACCS are:

MAGTF C2

Tactical Combat Operations (TCO) — As the hub of MTACCS, TCO will be the focal point of MAGTF command and control. It will provide the automation required by the MAGTF and subordinate commanders to receive, fuse, display, and disseminate selected input from the other component C2 systems. Additional attributes of TCO include: automated message handling; dissemination of operation orders and associated overlays; display of current friendly and enemy tactical situation; and interface with local and wide area networks. TCO will be used by commanders in the MAGTF Command Element and at all levels in the GCE, ACE, and CSSE.

GROUND

Multi-service Advanced Field Artillery Tactical Data System (MAFATDS) — MAFATDS will provide digital automated command and control for fire support coordination and tactical fire direction functions to all Fire Support Coordination Centers (FSCC's), Fire Direction Centers, Direct Air Support Centers (DASC's) as well as to Supporting Arms Coordination Centers. It will enhance the fire support capabilities and coordination of surface, naval, and air fires supporting the MAGTF.

AVIATION

Marine Air Command and Control System (MACCS) — This system provides the tactical air commander automated support to exercise control over MAGTF air operations. MACCS equipment includes the advanced Tactical Air Command Central (ATACC), the Tactical Air Operation Module (TAOM), and the Improved Direct Air Support Center (IDASC). The ATACC is the interface system with the MAGTF Command Element and will provide the integrating link for sharing data from MACCS into TCO.

INTELLIGENCE

Intelligence Analysis System (IAS) — Several systems compose the intelligence system for the MAGTF commander. Of these, the IAS is the fusion center that processes all-source information concerning the enemy, weather, and terrain; it is the interface system with TCO. IAS will have provisions for communications links with other intelligence systems, including the Technical Control and Analysis Center (TCAC), the Tactical Electronic Reconnaissance Processing and Evaluations System (TERPES), and the Joint Service Imagery Processing System (JSIPS).

COMBAT SERVICE SUPPORT

Marine Integrated Logistics System (MILOGS) and Marine Integrated Personnel System (MIPS) — The CSS component systems of MTACCS are MILOGS and MIPS. They will use existing information contained in automated information systems to analyze and provide data needed by the commander. MILOGS will support the MAGTF commander and his staff with automated logistics data and synopses of logistics and personnel information that will assist planning and execution. MIPS will interface with TCO and provide MTACCS with requisite manpower information. MIPS will use the common hardware and will base its software upon the Unit Commanders Personnel System (UCPS) currently in use throughout the FMF and Supporting Establishment.

PROGRAM STATUS: MTACCS meets the description and requirements of a program that lends itself to evolutionary acquisition. This permits an early fielding of existing capabilities or components under development, an initial period of operation by the user, and allows for refinement of requirements based on user experience and recommendations. The Marine Corps is planning a series of assessments of MTACCS. These will involve FMF units to ensure that MTACCS meets the user's requirements. This will be another step towards ensuring MTACCS provides the capability to combine desired information from individual systems into an integrated system in support of MAGTF commanders.

GLOBAL POSITIONING SYSTEM (GPS)

DESCRIPTION: GPS is a spaced-based radio navigation system that provides precise user location, (less than 16 meters spherical error probable), accurate velocity, and reference time anywhere on the earth. Signals are received from multiple satellites, processed, and displayed to the operator in the Military Grid Reference System, Universal Transverse Mercator, or latitude and longitude. Individuals, vehicles, boats, and aircraft will be able to rapidly determine their position and to navigate to any destination during periods of reduced visibility, under all weather conditions, and in featureless terrain.

PROCUREMENT PROFILE: FY-93

Quantity:

N/A

OPERATIONAL IMPACT: With the capabilities provided by GPS, Marine units will be gain significant enhancements over manual navigation methods (compass). It will greatly enhance the establishment of the PLRS community. The emplacement of radars, artillery, and missiles will be significantly improved since manually surveyed locations will no longer be a requirement. Aviation GPS receivers will enable all weather, over-the-horizon aircraft to arrive at exact locations and precisely deliver ordnance on target.

PROGRAM STATUS: The NAVSTAR GPS is a joint service program with the Air Force as the lead service. Currently, the Marine Corps has procured 950 non-crypto capable, hand-held receivers from Trimble Navigation Ltd. These receivers will be used until a crypto-capable hand-held receiver capable of receiving encrypted satellite signals is available in FY-94. Marine aviation begins installation of GPS receivers in FY-94. Aircraft will be equipped with integrated GPS as the primary navigational system.

DEVELOPER/MANUFACTURER: The manufacturer of this receiver has not been selected.



SINGLE CHANNEL GROUND AND AIRBORNE RADIO SYSTEM (SINCGARS)

DESCRIPTION: SINCGARS is a new family of frequency-hopping (FH) VHF-FM radios; both manpack and vehicular configurations. Selectable power settings and FH provide a low probability of intercept/detect capability. It is capable of voice or data, plain or cipher text, and remote control operation. SINCGARS is compatible in the single channel mode with the currently fielded VHF-FM families of radios. The SINCGARS radio will replace all AN/PRC-77 manpack, AN/GRC-160, Bancroft, and AN/VRC-12 series radios in the Marine Corps inventory. A new Remote Control Unit and Mast Antenna for use with SINCGARS is included in this program.

PROCUREMENT PROFILE: FY-93

Quantity: 5079

OPERATIONAL IMPACT: The Marine Corps is relying upon radio equipment which is over 25-years old and is difficult to support. The present VHF/FM radios are vulnerable to exploitation and interception and are severely degraded when operated in a jamming environment. SINCGARS will accommodate interoperability in joint and combined operations. Integrated communications security provides optimum capability for secure communication with minimum weight.

PROGRAM STATUS: The SINCGARS program is scheduled for a procurement decision in early 1992.

DEVELOPER/MANUFACTURER: ITT Aerospace/Communications Division.



ADVANCED TACTICAL AIR COMMAND CENTRAL (ATACC)

DESCRIPTION: The Advanced Tactical Air Command Central (ATACC) will significantly improve our present day capabilities to coordinate, plan and supervise the MAGTF's air support. The ATACC replaces the current AN/TYQ-1 and AN/TYQ-3A, and provides significant operational and logistics enhancements. The ATACC system consists of two identical suites of equipment housed in four 8' x 8' x 20' shelters. Each suite houses operator work stations, desktop communications units, data processors, computer programs, communications access devices, a large screen display, radios, and other equipment necessary to perform battle staff functions. ATACC provides planners and operators with computer assistance to effectively supervise and coordinate the planning and execution of the air battle. It provides automated data exchange of tactical information, a shared data base, and computer-generated orders. Planners and operators have access to information from the data base which is automatically updated by messages received from tactical data links. Information from messages is automatically posted in data files. In this manner, interaction with voice radios is reduced but more information is exchanged. Air Tasking Orders (ATO's) are automatically generated for operator validation, formatted, and routed to the interface port for transmission.

PROCUREMENT PROFILE: FY-93

Quantity: 1

OPERATIONAL IMPACT: The Tactical Air Command Center (TACC) is the senior Marine Aviation Command and Control System agency. The supervision and general control of all tactical air operations in the MAGTF area of responsibility are conducted in the TACC. The TACC also provides the Tactical Air Commander (TAC) with the facilities and means to direct and coordinate organic aviation assets with other services, and other forces. The current TACC, fielded in 1972, is logistically unsupportable and does not provide the TAC with critically important automated mission planning, decision support and message processing capabilities.

PROGRAM STATUS: The system has completed Milestone I and II, and contract award was made in December 1988. The contractor has completed hardware assembly and environmental testing and is in the process of integrating and testing software. IOC is scheduled for 4th Quarter FY-94.

DEVELOPER/MANUFACTURER: Grumman Data Systems, Springfield, VA.

JOINT SERVICE IMAGERY PROCESSING SYSTEM (JSIPS)

DESCRIPTION: The JSIPS is a mobile ground processing facility designed to receive and exploit Infrared (IR) and Electro-Optical (EO) imagery from tactical aerial reconnaissance systems. It will also receive and exploit imagery from national and theater sources. Product improvement options include a common radar processor to process both tactical and theater radars, and an automated capability to insert and process mapping, charting, and geodesy products.

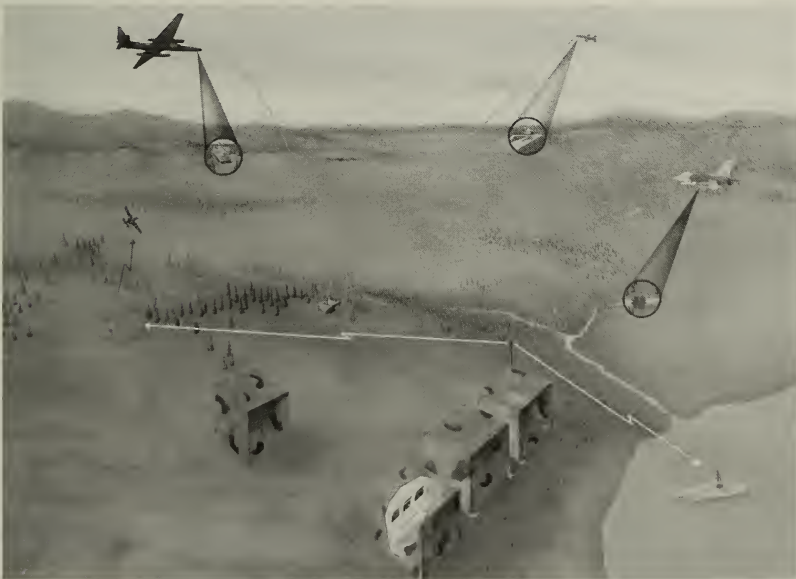
PROCUREMENT PROFILE: FY-93

Quantity: N/A

OPERATIONAL IMPACT: Current Marine Corps capability for processing and exploiting imagery is dedicated to hard copy (film based) products. The thrust of technology is near real-time, soft-copy, digital imagery, which is linked from the sensor platform to the processing facility. Direct down-link from aircraft to processor eliminates the time consuming steps required to down-load and process film-based imagery and will provide a more timely and responsive source of intelligence to the commander. In addition, soft-copy imagery exploitation allows the imagery interpreter to extract much more information than is normally attainable from film-based imagery.

PROGRAM STATUS: Contract signed August 1987 to produce Engineering Development Models (EDM's) for delivery in FY-92. IOC is scheduled for FY-95.

DEVELOPER/MANUFACTURER: E-Systems, Garland, TX.



TEAM PORTABLE COMMUNICATIONS INTELLIGENCE SYSTEM (TPCS)

DESCRIPTION: TPCS will introduce a semi-automated, man/team-transportable signals intelligence (SIGINT) system providing intercept, collection, radio direction finding, analysis, reporting, and collection management support to the MAGTF commander. TPCS will provide the full spectrum of SIGINT support to the MAGTF commander in a modular configuration. It will improve the support by utilizing new equipment which reflects current technology to provide coverage of hostile signals. TPCS will also provide a previously unavailable man-packed, semi-automated, computer-assisted capability to decrease the reporting time of critical intelligence information to the commander.

PROCUREMENT PROFILE: FY-93

Quantity: N/A

OPERATIONAL IMPACT: TPCS will be a logical continuation of current manpack receiver and direction finding (DF) system acquisition efforts and will fill a void in current SIGINT direct support efforts, especially in the initial phase of the amphibious landing. TPCS will provide flexible intra/inter-system communication and a microprocessor terminal that will enable the radio battalion to provide direct support to the MAGTF commander when larger systems are not available or appropriate.

PROGRAM STATUS: Prototype integration of this NDI system began in 3rd Quarter FY-89. TPCS user testing and evaluation is scheduled for 3rd Quarter FY-92, with a production decision planned during 4th Quarter FY-92.

DEVELOPER/MANUFACTURER: Harris Corp., Government Systems Sector, Melbourne, FL.



MOBILE ELECTRONIC WARFARE SUPPORT SYSTEM (MEWSS)

DESCRIPTION: The MEWSS is an electronic warfare system capable of rapid mobility over all types of terrain. The MEWSS electronic suite consists of a jammer and intercept receivers installed in a LAV chassis. The system is designed to provide MAGTF commanders with the capability to detect, determine Line of Bearing, and degrade enemy tactical communications during the amphibious assault and subsequent operations ashore.

PROCUREMENT PROFILE: FY-93

Quantity (PIP's):

N/A

OPERATIONAL IMPACT: The Marine Corps currently has a limited light armored mobile electronic warfare capability. The MEWSS will provide the ability to support mobile operations, both in the Amphibious Objective Area and during subsequent operations ashore.

PROGRAM STATUS: The basic AN/MLQ-36 was fielded in FY-90. A product improvement program (PIP) has been initiated to enhance the vehicle subsystem and upgrade the system capabilities to conduct operations against wider frequency coverage and agile threats.

DEVELOPER/MANUFACTURER: Vehicle: TACOM/General Motors Company, Ontario, Canada. PIP: Watkins-Johnson Electronic Systems Division, Savage, MD.



AN/TYQ-19 BLOCK UPGRADE

DESCRIPTION: The AN/TYQ-19 block upgrade is a response to a requirement to improve the Intelligence Analysis Center (IAC). This product improvement is called the Intelligence Analysis System (IAS). It is a vital component of the Marine Air Ground Intelligence System (MAGIS), processing information from imagery systems, signals intelligence, airborne electronic reconnaissance, Navy, other Service, theater and National assets. The resultant intelligence is presented to the tactical commander and disseminated as required. The bulk of this information is stored in a data base—currently the Naval Intelligence Processing System (NIPS) data base. NIPS will transition to the Defense Intelligence Agency's Integrated Data Base (IDB) by the end of FY-92.

The Block 2 upgrade will field LAN-based microcomputer systems (Suites) and single workstations at the Battalion/Squadron level, while the Block 3 upgrade will replace the existing IAC with a HMMWV-mounted shelter for larger headquarters.

PROCUREMENT PROFILE: FY-93

Quantity:

Block 2 Upgrade:

Suite	28
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Workstations	—
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Block 3 Upgrade:	—
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OPERATIONAL IMPACT: The IAS will allow the system to use data from the IDB, will give it a mobility commensurate with the assigned unit, and will extend selected automated intelligence capabilities to organizations below the MEF level. The current IAC is too large and is impractical for use with anything less than a full MEF deployment. The upgraded IAS will include versions which are deployable with smaller MAGTF's. The IAC must be upgraded to retain a national and joint data base capability following the implementation of IDB in 1992.

PROGRAM STATUS: Three Block 2 prototype systems are currently being evaluated by the FME. The results of this evaluation will be used to develop Block 2 Upgrade Suites for procurement and fielding in FY-92/93. The Block 3 Upgrade system and the stand-alone workstation will be developed for procurement and fielding in FY-94/95.

DEVELOPER/MANUFACTURER: Software development — MCTSSA; Hardware integration — Naval Weapons Support Center, Crane, Indiana.

TACTICAL ELECTRONIC RECONNAISSANCE PROCESSING AND EVALUATION SYSTEM (TERPES)

DESCRIPTION: TERPES is a segment of the Marine Air Ground Intelligence System (MAGIS). The system processes and identifies electronics intelligence (ELINT) data collected from the EA-6B aircraft and correlates it with ELINT from the Tactical Receive Equipment (TRE) system. This data is fused with the Electronic Order of Battle (EOB) to provide enemy radar locations to the command, control and intelligence elements of the MAGTF. The data also provides electronic warfare strike mission intelligence support.

PROCUREMENT PROFILE: FY-93

Phase III upgrade:

N/A

OPERATIONAL IMPACT: The EA-6B/ TERPES is the Marine Corps' organic asset for processing tactical ELINT data. This data provides the MAGTF with ELINT and EOB information required to perform successful strike mission planning. The planned upgrades will provide a near real-time processing capability of time sensitive intelligence during the 1990's. This upgrade will fulfill the requirement to use the Military Integrated Intelligence Data System provided by Defense Intelligence Agency. This product improvement will provide near real-time communication data link capability with the EA-6B and TRE. Further, using the Rapid Information Management System as the communications processor allows TERPES to interface with a host of other intelligence systems.

PROGRAM STATUS: TERPES Phase III upgrade started in June 1989 and will be fielded in May 1992.

TACTICAL REMOTE SENSOR SYSTEM (TRSS)

DESCRIPTION: TRSS is a suite of unattended ground sensor equipment that provides the MAGTF commander with a state-of-the-art electronic system capable of continuous, all weather detection, location determination and monitoring of activity in an objective area. TRSS is comprised of hand- and air-emplaced remote sensors and relays, and data storage and readout equipment. The remote sensor devices detect activity using seismic, magnetic, infrared and imaging technologies. The current set of sensor equipment, referred to as Phase III, is unsupportable and no longer a viable combat asset. The Phase V suite of replacement equipment will be in service in 1992. The goal of the modernization program is to upgrade the existing sensor capability with sensors that are smaller, lighter, and more cost effective by taking advantage of modern technology in micro-miniaturization and packaging techniques.

PROCUREMENT PROFILE: FY-93

Quantity:

N/A

OPERATIONAL IMPACT: The TRSS Phase V PIP will sustain an existing combat capability by replacing obsolete and unsupportable equipment. The system will significantly enhance tactical intelligence gathering capabilities for the MAGTF.

PROGRAM STATUS: Pre-production engineering and Low Rate Initial Production (LRIP) are concurrently being done by an in-house government facility. IOC is scheduled for 4th Quarter FY-92.

DEVELOPER/MANUFACTURER: Sandia National Labs, Albuquerque, NM (Early R&D);Naval Avionics Center, Indianapolis, IN (Pre-Production and Production).

RIVERINE ASSAULT CRAFT (RAC)

DESCRIPTION: The Riverine Assault Craft (RAC) is a 35-foot, aluminum-hulled craft, powered by twin inboard diesel engines and propelled by twin water jets. It is equipped with fore and aft gun mounts, for either .50 caliber machine guns or 40mm grenade launchers, and two mounts for two machine guns. It can mount a full suite of military and commercial communications and navigation equipment. Total payload is 3500 pounds with an operating combat radius of 100 miles. The RAC is designed for estuary or riverine mission areas. It is a non-developmental item using an existing boat design that is compatible with appropriate Navy and Marine Corps weapons systems, ammunition, fuel, and military communications and navigation components.

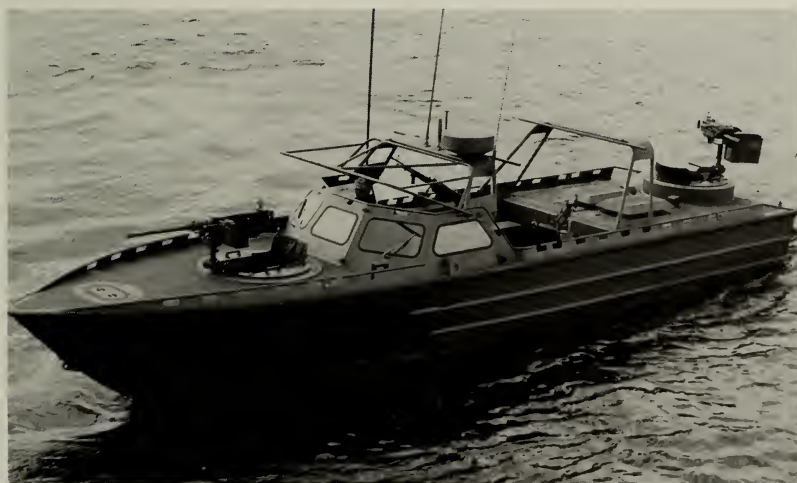
PROCUREMENT PROFILE: FY-93

Quantity: 9

OPERATIONAL IMPACT: This high speed, multi-purpose riverine craft is primarily for direct fire support and command and control. It will provide the MAGTF commander with these riverine forces capabilities: (1) high speed pursuit/intercept of hostile craft; (2) armed escort and direct fire support for surveillance, interdiction, and security operations; (3) transport squad size reaction, reconnaissance, and raid/assault forces; (4) a survivable command and control platform for all missions; (5) armed river reconnaissance and screening for patrols and assault forces; and (6) a platform for a signal intelligence capability.

PROGRAM STATUS: Milestone III July 1991
IOC 1st Quarter 1992
FOC 4th Quarter 1994

DEVELOPER/MANUFACTURER: Sea Ark Marine, Inc.



“WASP” CLASS (LHD)

DESCRIPTION: The *WASP* class (LHD) is a multi-purpose amphibious assault ship. The ship's primary mission is to embark, deploy, and land elements of a Marine landing force in an amphibious assault by helicopters, landing craft, amphibious vehicles, or a combination of these methods. The LHD class has a secondary/convertible mission for sea control.

PROCUREMENT PROFILE: FY-93

Quantity: N/A

OPERATIONAL IMPACT: Amphibious forces, a vital component of a balanced naval capability, provide a unique flexibility to the National Command Authority. An especially unique capability of the amphibious force is its ability to permit rapid projection ashore of a combined armed force by air and surface means. The LHD class ship provides this capability. The LHD increases the total lift capacity by providing both a flight deck for helicopters and V/STOL aircraft and a well deck for both air-cushioned and conventional landing craft.

PROGRAM STATUS: Contract awards for four LHD's have been awarded for construction. A fifth LHD (USS *BATAAN*) was appropriated in the FY-91 budget and the sixth is programmed for FY-96. Seven LHD's are required to support peacetime presence missions.

DEVELOPER/MANUFACTURER: Ingalls Shipbuilding, Pascagoula, MS.



LX

DESCRIPTION: The LX is envisioned to be an LPD-like ship, optimized for operational flexibility and the lift requirements for the MAGTF. The notional LX, as developed in the 1990 DON Integrated Amphibious Operations and USMC Air Support Requirements Study, will carry 700 troops and have a capacity of 25,000 square feet and 25,000 cubic feet of cargo.

PROCUREMENT PROFILE: TBD

OPERATIONAL IMPACT: Current emphasis on regional contingencies and rapid deployment by the Navy/Marine Corps team increases the importance of amphibious lift assets. To overcome LPD and other block obsolescence shortfalls in the future, LX will provide the versatility of the LPD, LHA and LHD with its well deck and flight deck.

PROGRAM STATUS: The 1990 DON Integrated Amphibious Operations and USMC Air Support Requirements Study reaffirmed the LX requirement. The LX Mission Need Statement was validated in September 1990. The Defense Acquisition Review Board (DAB) approved Milestone O for LX in November 1990. In February 1991, the Center for Naval Analyses was tasked to perform a Cost and Operational Effectiveness Analysis (COEA) on the LX. Detail design and construction of the lead LX is presently scheduled for the mid-90's with initial ship delivery in the 2000/2001 timeframe.

DEVELOPER/MANUFACTURER: Not applicable.



CHAPTER FIVE

FISCAL RESOURCE OVERVIEW

D*esert Shield/Storm* proved that the investment made during the 1980's to modernize the Marine Corps was a wise and prudent allocation of resources. The challenge of the 1990's will be to maintain this level of readiness in the face of reduced budgets over the last 5 years. Through innovative management techniques, including the adoption of Total Quality Leadership, we have maintained an acceptable level of readiness in our operating forces. Given the uncertainty of today's world, it is of paramount importance that the Marine Corps maintains its current level of readiness. This becomes even more important as the Marine Corps becomes smaller in the years to come.



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In order for the Marine Corps to accomplish its mission, we must: replace obsolete equipment, maintain a technological edge, continue realistic training, and maintain the highest quality of life for our Marines in order to attract and retain the quality of Marines we have today. This chapter outlines the financial resources required to maintain the Marine Corps as a premier force-in-readiness.

Financial Resources

Financial resources are those funds that are programmed, budgeted, authorized, appropriated, obligated, and finally expended to cover service investment and operational requirements. Total Obligational Authority (TOA) refers to the total financial resources available to DoD. The DoD Planning, Programming, and Budgeting System establishes the ground rules for the allocation of the DoD TOA. Displayed in Figure 5-1 is the TOA for all of DoD from FY-90 through the FY-93 President's Budget request:

FIGURE 5-1

	FY-90	FY-91	FY-92	FY-93
\$ Billions	291.3	295.1	278.3	267.7

There is a general perception that Defense spending has grown dramatically over the past few years. As can be seen in Figure 5-2, the resources allocated to the Defense Department have been actually been steadily declining over the past 7 years. The cumulative real decline, in constant budget dollars, is a 34 percent reduction in budget authority. Viewed in broader terms, defense spending as a percentage of federal spending and Gross National Product has also decreased. In fact, defense spending as a share of our total national resources is near its lowest point in 40 years. Data to support this is depicted in Figure 5-3.

FIGURE 5-2:
DOD TOA IN CONSTANT BUDGET DOLLARS (CONSTANT FY-92 \$)

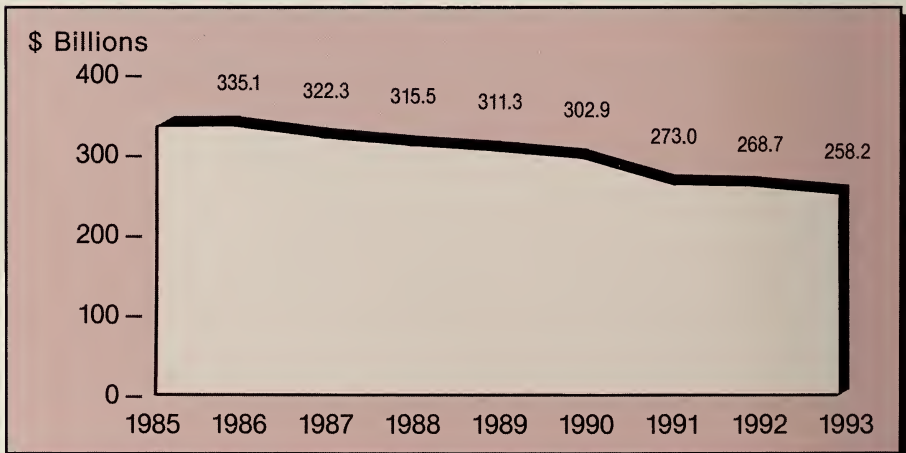
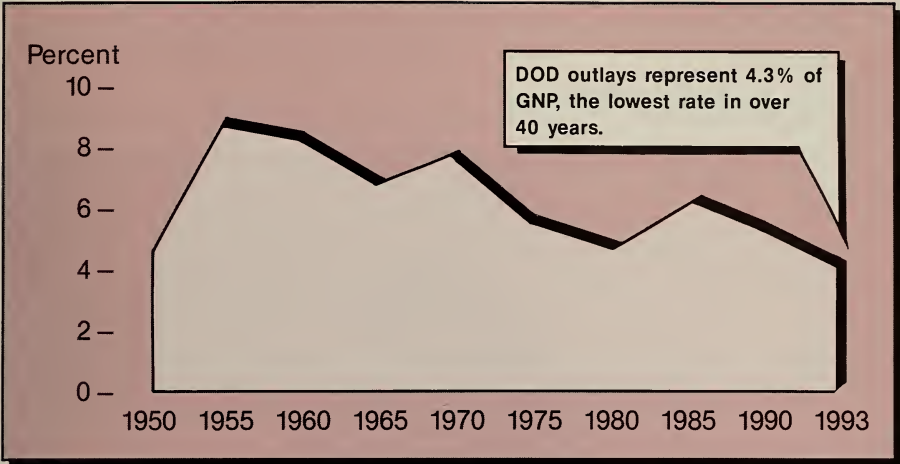
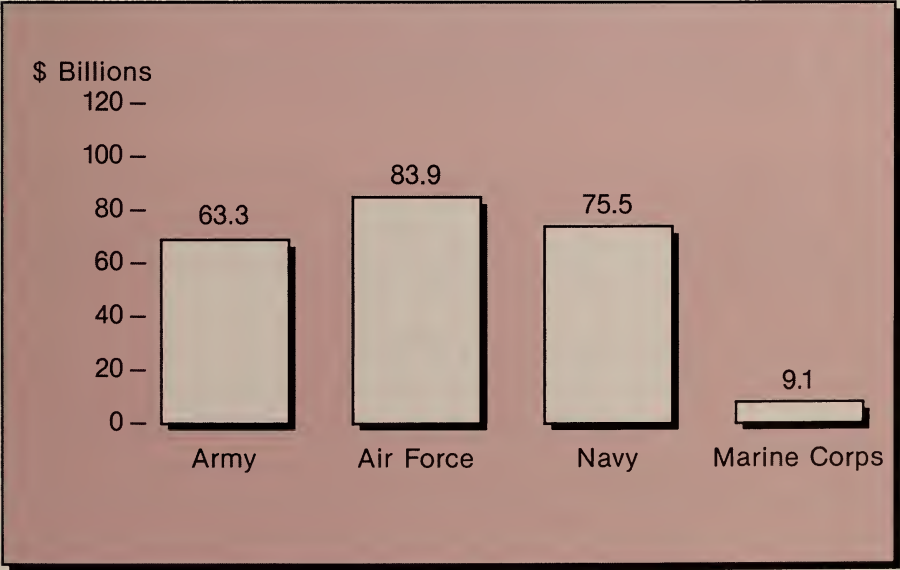


FIGURE: 5-3:
DOD TOA AS PERCENT OF GNP
1950 – 1993



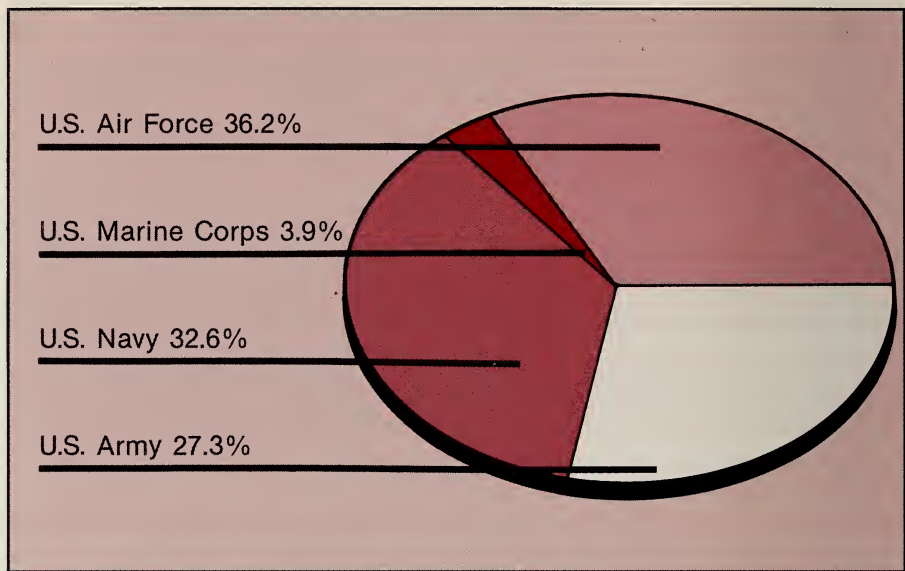
Displayed below in Figure 5-4 is a comparison of the relative amount of resources provided to each Service. While the Marine Corps share is comparatively small, the Marine Corps leads the DoD in converting each and every dollar into credible combat power. With little more than three percent of DoD's budget the Marine Corps provides more than 10 percent of the military personnel and over 15 percent of the general purpose forces.

FIGURE: 5-4:
SERVICE COMPARISON OF TOA FY-93 DOD BUDGET
(LESS AGENCIES)



Displayed below in Figure 5-5 is a chart which depicts the percentage of DoD funds budgeted by each service. Each Service's total funding or TOA is subsequently divided into appropriations.

**FIGURE: 5-5:
DOD TOA FY-93 BY SERVICE
(LESS DOD AGENCIES)**



Appropriations

An appropriation is the legal apportionment by an act of Congress to incur obligations for specific purposes and make payments from the Treasury of the United States. Funds may be expended only for the purpose for which appropriated. Following are the Marine appropriation titles with a brief synopsis of what each provides:

- **Military Personnel, Marine Corps (MPMC)**

For pay, allowances, individual clothing, interest on deposits, expenses for organization movements and expenses of temporary duty travel between permanent duty stations.

- **Reserve Personnel, Marine Corps (RPMC)**

For pay, allowances, clothing, subsistence, gratuities, travel, and related expenses for personnel of the Marine Corps Reserve on active duty.

- **Operation and Maintenance, Marine Corps (O&MMC)**

For expenses necessary for support of the FMF, civilian employee pay, travel and transportation, training, consumable supplies, recruiting and advertising, base operations and base communications and subsistence.

- **Operation and Maintenance, Marine Corps Reserve (O&MMCR)**

For expenses necessary for the operation and maintenance, including training, organization and administration of the Marine Corps Reserve; repair of facilities and equipment; hire of passenger motor vehicles; travel and transportation; and communications.

- **Procurement, Marine Corps (PMC)**

For expenses necessary for the procurement and manufacture of ammunition, weapons and tracked combat vehicles, guided missiles and equipment, communications and electronics, support vehicles, engineer and other equipment and spares and repair parts.

The following navy appropriations include functional areas for which the Marine Corps programs and budgets its own share. The complete TOA for the Marine Corps includes both the Marine unique appropriations above, as well as our resources from the following appropriations.

- **Military Construction, Navy (MCON)**

For acquisition, construction and installation of permanent public works, naval installations and facilities for the Navy and the Marine Corps.

- **Family Housing, Navy and Marine Corps (FHN&MC)**

For the construction, maintenance, repair and design of Navy and Marine Corps housing and ancillary facilities required at bases and stations.

- **Navy Stock Fund (NSF)**

For the procurement of stock funded War Reserve Materiel required to achieve a materiel support posture to provide war reserve asset levels and inventory objectives for combat-critical items. Examples include: supplies, minor items of equipment, and parts used in the manufacture, assembly or repair of items of equipment.

- **Military Construction, Navy Reserve (MCNR)**

For construction, acquisition, expansion, rehabilitation, and conversion of facilities for the training and administration of the reserve components of the Navy and Marine Corps.

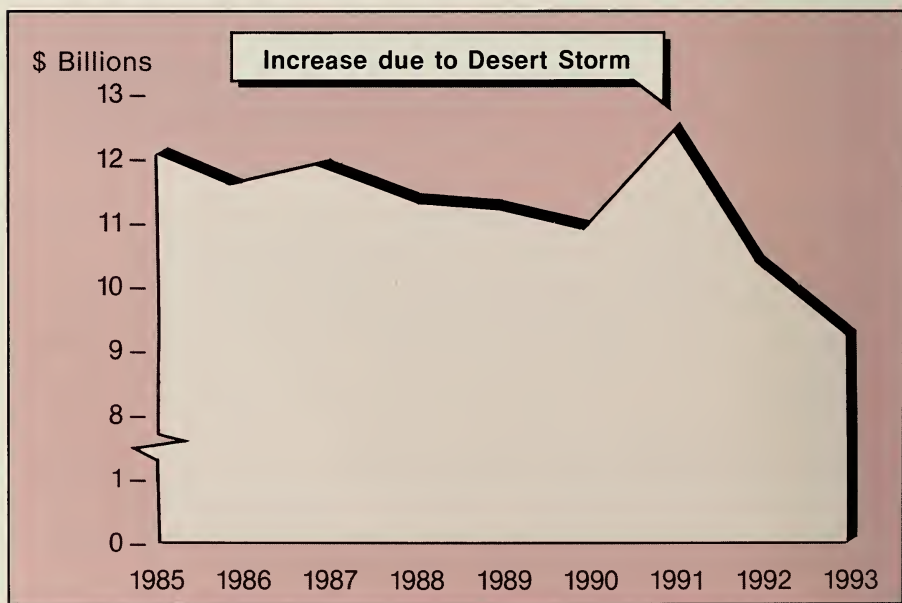
A display of the TOA, in millions of dollars, allocated to each of these appropriations is displayed below:

FIGURE: 5-6:
MARINE CORPS TOA

	Current Year \$			
	FY-90	FY-91	FY-92	FY-93
MPMC	5,799	5,912	6,084	6,105
RPMC	314	337	349	338
O&MMC	1,851	1,890	2,110	1,646
O&MMCR	78	85	92	75
PMC	1,100	690	1,037	588
NSF (MC)	26	0	0	0
FHMC	151	133	131	160
MCON	162	139	95	163
MCNR	16	9	5	0
TOTAL	9,497	9,195	9,903	9,075

Figure 5-7 depicts the budget trends of the past several years in constant dollar terms. This data reveals the total impact of reduced spending over time. The Marine Corps, in relative and cumulative terms, has absorbed a 25 percent reduction in resources since 1985. Further reduction, beyond those already programmed, will severely impact the Fleet Marine Force, and our ability to maintain ready forces in support of the National Security Strategy.

FIGURE 5-7:
TOTAL OBLIGATED AUTHORITY (FY-93 CONSTANT DOLLARS)



The allocation of Marine Corps resources to specific appropriations for FY-93 is shown in Figure 5-8 below:

FIGURE: 5-8:
USMC FY-93 TOA BY APPROPRIATION

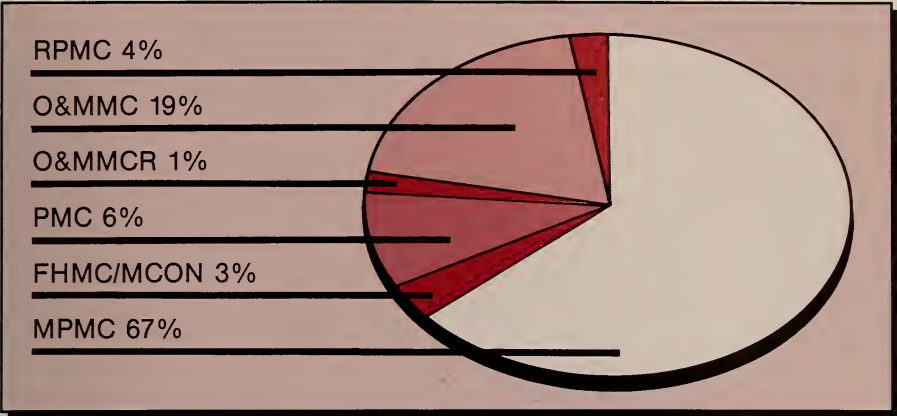


Figure 5-9 depicts how the Marine Corps procurement resources (PMC appropriation) is allocated to budget activities for the FY-93 Budget.

FIGURE: 5-9:
MARINE CORPS PROCUREMENTS BY BUDGET ACTIVITIES

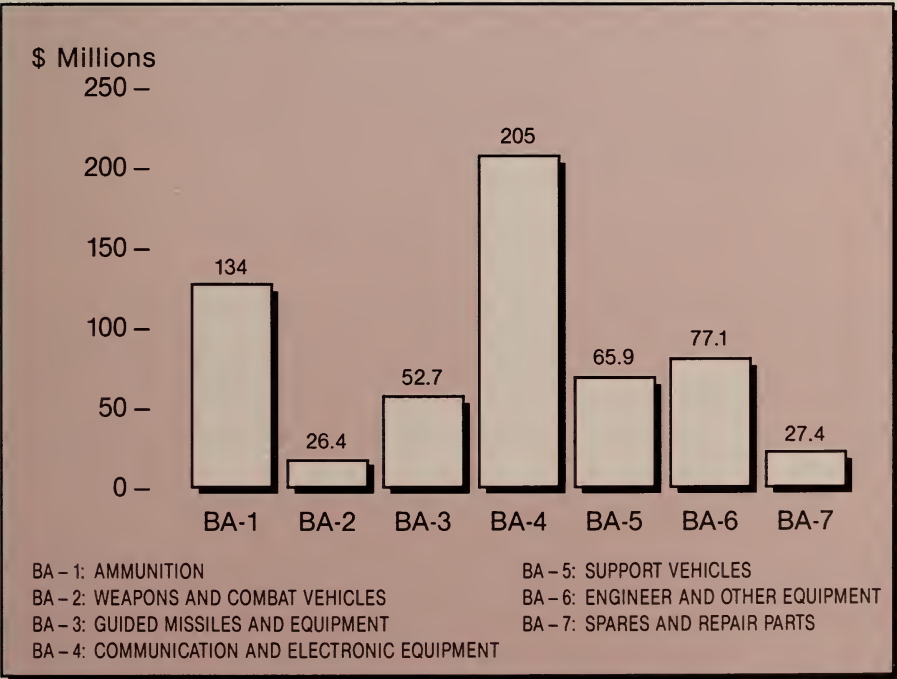
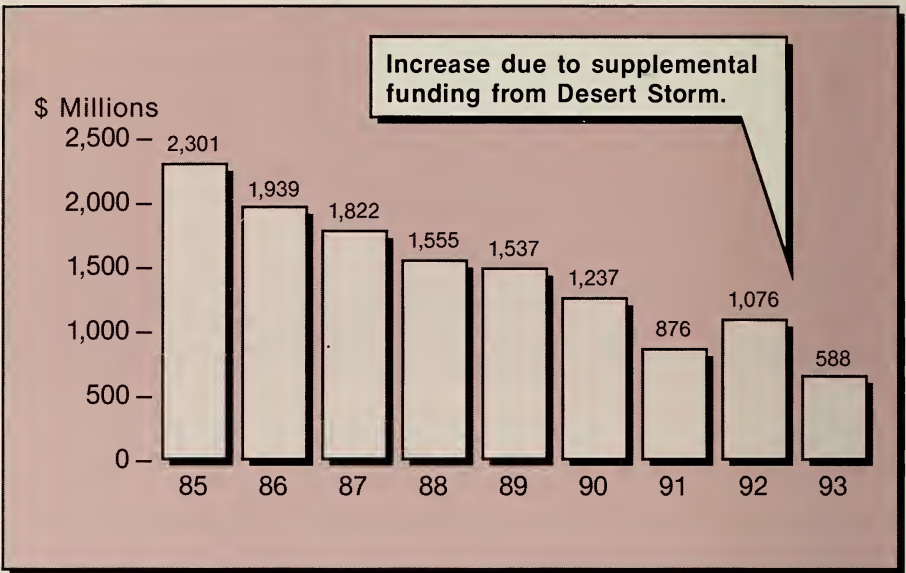


Figure 5-10 depicts the PMC appropriation over the past several years, in constant dollars.

FIGURE: 5-10:
PROCUREMENT MARINE CORPS
FY-93 CONSTANT DOLLARS

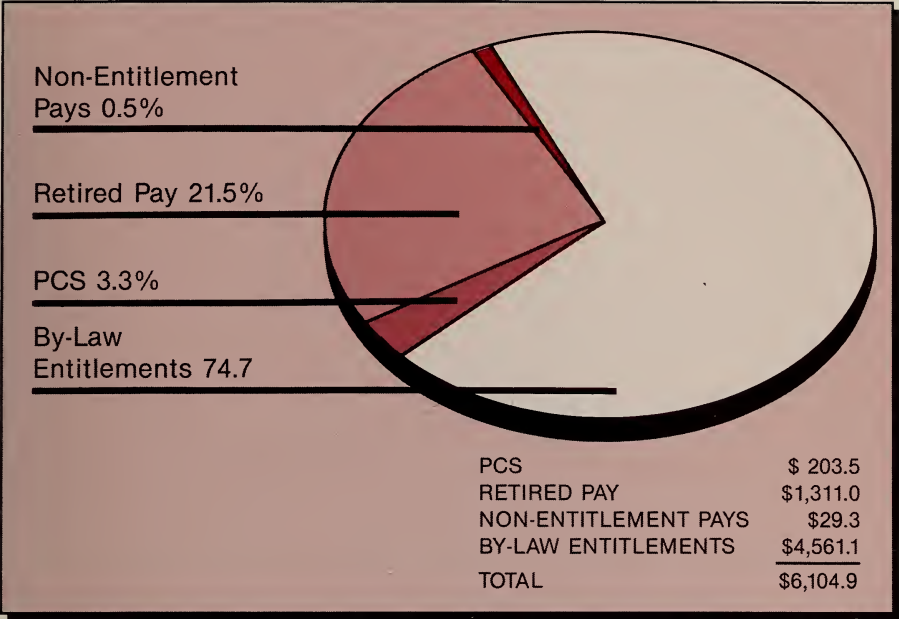


The two largest elements within the Marine Corps' current budget request are the Manpower or MPMC appropriation and the Operation and Maintenance (O&MMC) account. These two appropriations support our military personnel, readiness, and operations programs. A general breakout of the appropriations are displayed in Figures 5-11 and 5-12.

Military Personnel Marine Corps Budget

Although our TOA allocation represents 3.4 percent of the entire DoD budget authority, the Marine Corps provides 10 percent of all military personnel. The Marine Corps budget, like its contribution to national security, is manpower intensive. In all, the Military Personnel Marine Corps (MPMC) account makes up 67 percent of the Marine Corps budget. The MPMC resources are distributed in the following categories:

FIGURE: 5-11
MILITARY PERSONNEL
FY-93 BUDGET (DOLLARS IN MILLIONS)



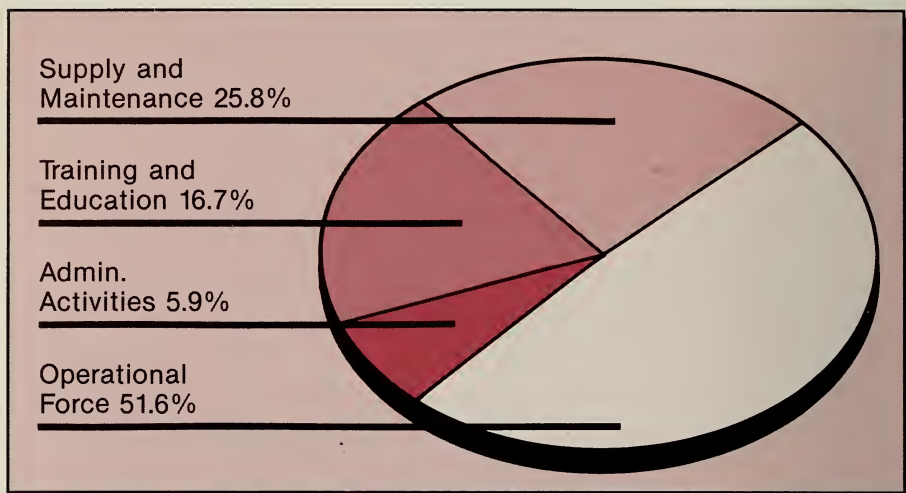
Non-entitlement programs include such programs as the Selective Reenlistment Bonus, Enlistment Bonus, Aviation Career Pay, and Foreign Language Proficiency Pay. These pays are discretionary in nature, which means that the Marine Corps determines who qualifies and receives them. Non-entitlement pays make-up 0.5 percent of the MPMC budget. Retired pay and by-law entitlements constitute 96 percent of the MPMC budget. These pays, which include basic pay, subsistence allowance, and housing allowance are determined by law and must be paid to all eligible Marines; there are no discretionary actions associated with these types of pay.

The last category is Permanent Change of Station (PCS) funds. They include accession and separation moves, operational, rotational, and training moves. By their nature, PCS moves have a discretionary and non-discretionary aspect associated with them and account for 3.3 percent of the MPMC budget.

O&MMC

The O&MMC budget request of \$1.646 Billion represents, in real terms, a decline of 4.6 percent over FY-92 after factoring in program transfers, projected Defense Management Review savings, and supplemental funding. This reduction, coupled with increased environmental and quality of life requirements, greatly reduces our flexibility in matching ends to means.

FIGURE 5-12:
OPERATIONS AND MAINTENANCE
BY MAJOR ACTIVITY



The O&MMC account is a crucial component of our overall readiness posture. Fleet Marine Force and Base operating costs are grouped under Operational Forces, the largest portion of the O&M appropriation. Adequate funding for the supporting establishment is essential to the readiness of the Fleet Marine Force. The supporting establishment provides the housing, feeding, training ranges/areas, and other essential facilities and services to support operational and training requirements and provide for the welfare of our Marines and dependents. The maintenance of this infrastructure is essential to the maintenance of an acceptable quality-of-life for our Marines while ensuring an adequate working and training environment.

Supply and Maintenance provides the essential logistics functions which allow us to maintain the readiness and sustainability of the weapons and equipment utilized by our Forces. Our logistic bases provide support and depot level maintenance to sustain the daily operations of the Fleet Marine Force, as well as the weapons and equipment maintenance for the Maritime and Geographic Prepositioning Programs. The budget request provides continued support for this vital program through the replenishment, modernization, and replacement of equipment during the MPS maintenance cycle. Also funded under this program is the transportation of material to and from the Marine Corps Logistics Bases, and the subsistence provided to Marines.

The O&MMC request also supports our training and education activities. The Marine Corps emphasizes education and proficiency in the science and art of warfighting. To accomplish this, our education programs strive to ensure that every Marine is either attending a formal school or participating in a structured self-study program.



*“For the world is still
a dangerous place.
Only the dead have
seen the end of
conflict. And though
yesterday’s challenges
are behind us,
tomorrow’s are
being born.”*



President George Bush
State of the Union Address
January 28, 1992

APPENDIX

GLOSSARY

AAA

Advanced Assault Amphibian

AAV

Assault Amphibious Vehicle

AAWS-M

*Advanced Anti-tank Weapon
System-Medium*

ACE

Aviation Combat Element

ACF

Air Contingency Force

AE

Assault Echelon

AFOE

Assault Follow-On Echelon

ANGLICO

*Air Naval Gunfire Liaison
Company*

AOA

Amphibious Objective Area

AOR

Area of Responsibility

APC

Armored Personnel Carrier

APN

Aircraft Procurement, Navy

APPN

Appropriation

ARBS

Angle Rate Bombing System

ASN(RD&A)

*Assistant Secretary of the Navy
(Resource Development and
Acquisition)*

ASP

Ammunition Supply Point

AT-4

Anti-tank Weapon

ATACC

*Advanced Tactical Air Command
Central*

ATARS

*Advanced Tactical Aerial
Reconnaissance System*

ATF

Amphibious Task Force

ATO

Air Tasking Order

AVN

Aviation

C2I

*Command, Control and
Intelligence*

C4

*Command, Control,
Communications and Computer
Systems*

CAL

Caliber

CAM

Chemical Agent Monitor

CATF

*Commander Amphibious Task
Force*

CAX
Combined Arms Exercise

CBRS
Concepts Based Requirements System

CE
Command Element

CECM
Communication Electronic Countermeasures

CENTCOM
Central Command

CG
Commanding General

CI
Counterintelligence

CINC
Commander-in-Chief

CINCCENT
Commander in Chief Central Command

CMC
Commandant of the Marine Corps

COEA
Cost and Operational Effectiveness Analysis

COMINT
Communications Intelligence

COMSEC
Communications Security

CONUS
Continental United States

CP
Command Post

CPA
Chairman's Program Assessment

CSS
Combat Service Support

CSSA
Combat Service Support Area

CSSE
Combat Service Support Element

CV
Cargo Variant

CVBG
Carrier Battle Group

DAB
Defense Acquisition Board

DASC
Direct Air Support Center

DCS
Defense Communications System

DC/S
Deputy Chief of Staff

DE
Directed Energy

DEMVAL
Demonstration and Validation

DF
Direction Finding

DIA
Defense Intelligence Agency

DNCPPG <i>Department of the Navy Consolidated Planning and Programming Guidance</i>	FDC <i>Fire Direction Center</i>
DPG <i>Defense Planning Guidance</i>	FH <i>Frequency Hoping</i>
DoD <i>Department of Defense</i>	FHN&MC <i>Family Housing, Navy and Marine Corps</i>
DON <i>Department of the Navy</i>	FIE <i>Fly-in Echelon</i>
DPRB <i>Defense Planning and Resources Board</i>	FLIR <i>Forward Looking Infrared</i>
DT <i>Developmental Test</i>	FMF <i>Fleet Marine Force</i>
DWT <i>Division Wing Team</i>	FMFLANT <i>Fleet Marine Force, Atlantic</i>
ECCM <i>Electronic Counter- Countermeasures</i>	FMFPAC <i>Fleet Marine Force, Pacific</i>
ECM <i>Electronic Countermeasures</i>	FOC <i>Full Operational Capability</i>
EDM <i>Engineering Development Model</i>	FSCC <i>Fire Support Coordination Center</i>
ELINT <i>Electronic Intelligence</i>	FSD <i>Full Scale Development</i>
EO <i>Electro-Optical</i>	FSED <i>Full Scale Engineering Development</i>
EOB <i>Electronic Order of Battle</i>	FSSG <i>Force Service Support Group</i>
EPW <i>Enemy Prisoner Of War</i>	FTS <i>Full-Time Support</i>
ESS <i>Electronic Intelligence (elint) Support System</i>	FY <i>Fiscal Year</i>
EW <i>Electronic Warfare</i>	GCE <i>Ground Combat Element</i>
FAC <i>Forward Air Controller</i>	GCS <i>Ground Control Station</i>
FAST <i>Fleet Anti-Terrorism Security Team</i>	GP <i>General Purpose</i>
	GNP <i>Gross National Product</i>

GPS <i>Global Positioning System</i>	IOC <i>Initial Operating Capability</i>
HARM <i>Homing Anti-Radiation Missile</i>	IR <i>Infrared</i>
HEAA <i>High Explosive Anti-Armor</i>	IRR <i>Individual Ready Reserve</i>
HEAT <i>High Explosive Anti-Tank</i>	ISIS <i>Integrated Signals Intelligence System</i>
HEAT-MP-T <i>Heat-Multi-Purpose-Tracer</i>	JCS <i>Joint Chiefs of Staff</i>
HEDP <i>High Explosive, Dual Purpose High Mobility Multi-purpose Wheeled Vehicle</i>	JSIP <i>Joint Service Imagery Processing System</i>
HOW <i>Howitzer</i>	KE <i>Kinetic Energy</i>
HP <i>Horsepower</i>	KHZ <i>Kilohertz</i>
HQ <i>Have Quick</i>	LAAD <i>Low Altitude Air Defense</i>
HQMC <i>Headquarters Marine Corps</i>	LAI <i>Light Armored Infantry</i>
HUMINT <i>Human Intelligence</i>	LAAM <i>Light Anti-Aircraft Missile</i>
IAC <i>Intelligence Analysis Center</i>	LAW <i>Lightweight Anti-armor Weapon</i>
IAS <i>Intelligence Analysis System</i>	LAV <i>Light Armored Vehicle</i>
ICAD <i>Individual Chemical Agent Detector</i>	LAV-AD <i>Light Armored Vehicle Air Defense</i>
IDA <i>Institute for Defense Analysis</i>	LCAC <i>Landing Craft Air Cushion</i>
IDB <i>Integrated Data Base</i>	LDS <i>Lightweight Decontamination System</i>
IFF <i>Identification Friend or Foe</i>	LHD <i>Amphibious Assault Ship (Multi-purpose)</i>
IMINT <i>Imagery Intelligence</i>	LIC <i>Low Intensity Conflict</i>
INTEL <i>Intelligence</i>	

LLI <i>Long Lead Item</i>	MCAS <i>Marine Corps Air Station</i>
LOB <i>Line-of-Bearing</i>	MCB <i>Marine Corps Base</i>
LPH <i>Landing Ship Helicopter</i>	MCCDC <i>Marine Corps Combat Development Command</i>
LRIP <i>Low Rate Initial Production</i>	MCDN <i>Marine Corps Data Network</i>
LVS <i>Logistics Vehicle System</i>	MCM <i>Mine Counter Measures</i>
MAC <i>Military Airlift Command</i>	MCMWTC <i>Marine Corps Mountain Warfare Training Center</i>
MACCS <i>Marine Aviation Command and Control System</i>	MCON <i>Military Construction, Navy</i>
MAG <i>Marine Aircraft Group</i>	MCNR <i>Military Construction, Naval Reserve</i>
MAGIS <i>Marine Air-Ground Intelligence System</i>	MCRC <i>Marine Corps Research Center</i>
MAGTEC <i>Marine Air-Ground Training and Education Center</i>	MCRDAC <i>Marine Corps Research, Development, and Acquisition Command</i>
MAGTF <i>Marine Air-Ground Task Force</i>	MCSF <i>Marine Corps Security Forces</i>
MARCENT <i>Marine Forces Central Command</i>	MCU <i>Marine Corps University</i>
MARDIV <i>Marine Division</i>	MEB <i>Marine Expeditionary Brigade</i>
MAW <i>Marine Aircraft Wing</i>	MEF <i>Marine Expeditionary Force</i>
MAWTS-1 <i>Marine Aviation Weapons and Tactics Squadron-One</i>	MEU <i>Marine Expeditionary Unit</i>
MBST <i>Marine Battle Skills Training</i>	MEU(SOC) <i>Marine Expeditionary Unit (Special Operations Capable)</i>
MBT <i>Main Battle Tank</i>	MEWSS <i>Mobile Electronic Warfare Support System</i>
MCAGCC <i>Marine Corps Air Ground Combat Center</i>	

MG <i>Machine Gun</i>	NATO <i>North Atlantic Treaty Organization</i>
MIIDS <i>Military Integrated Intelligence Data System</i>	NBC <i>Nuclear, Biological and Chemical</i>
MILES <i>Multiple Integrated Laser Engagement System</i>	NBCRS <i>NBC Reconnaissance System</i>
MLR <i>Medium Lift Replacement</i>	NCA <i>National Command Authority</i>
MLRP <i>Marine Corps Long Range Plan</i>	NCO <i>Noncommissioned Officer</i>
MLRS <i>Multiple Launch Rocket System</i>	NDI <i>Non-Developmental Item</i>
MMP <i>MAGTF Master Plan</i>	NIPS <i>Naval Intelligence Processing System</i>
MNS <i>Mission Needs Statement</i>	NM <i>Nautical Mile</i>
MOS <i>Military Occupational Specialty</i>	NSE <i>Navy Support Element</i>
MOUT <i>Military Operations in Urban Terrain</i>	NSF <i>Navy Stock Fund</i>
MPF <i>Maritime Prepositioning Force</i>	NTS <i>Naval Telecommunications System</i>
MPMC <i>Military Personnel, Marine Corps</i>	O&MMC <i>Operation and Maintenance, Marine Corps</i>
MPN <i>Military Personnel, Navy</i>	O&MMCR <i>Operation and Maintenance, Marine Corps Reserve</i>
MPS <i>Maritime Prepositioning Ships</i>	O&MN <i>Operation and Maintenance, Navy</i>
MRS <i>Mobility Requirement Study</i>	O&MNR <i>Operation and Maintenance, Navy Reserve</i>
MSC <i>Military Sealift Command</i>	OPEVAL <i>Operational Evaluation</i>
MTCCS <i>Marine Tactical Command and Control System</i>	OPN <i>Other Procurement, Navy</i>
NALMEB <i>Norway Air-Landed MEB</i>	

ORDS <i>Operational Requirement Documents</i>	QOL <i>Quality of Life</i>
OSD <i>Office of the Secretary of Defense</i>	RAC <i>Riverine Assault Craft</i>
OT <i>Operational Testing</i>	R&D <i>Research and Development</i>
OT&E <i>Operational Test and Evaluation</i>	RD&EN <i>Research, Development, Test and Evaluation Navy</i>
OTH <i>Over the Horizon</i>	RF <i>Radio Frequency</i>
PAA <i>Programmed Aircraft Authorization</i>	RIMS <i>Rapid Information Management System</i>
PCPS <i>Portable Collective Protection System</i>	ROC <i>Required Operational Capability</i>
PCS <i>Permanent Change of Station</i>	RO/RO <i>Roll-On/Roll-Off</i>
PCS <i>Portable Control Station</i>	RPMC <i>Reserve Personnel, Marine Corps</i>
PDA <i>Principal Design Activity</i>	RPN <i>Reserve Personnel, Navy</i>
PIP <i>Product Improvement Program</i>	RPV <i>Remotely Piloted Vehicle</i>
PLRS <i>Position Location Reporting System</i>	RRC <i>Rigid Raider Craft</i>
PMC <i>Procurement, Marine Corps</i>	RRF <i>Ready Reserve Fleet</i>
PME <i>Professional Military Education</i>	RSCAAL <i>Remote Sensing Chemical Agent Alarm</i>
PMS <i>Pedestal Mounted Stinger</i>	SAR <i>Search and Rescue</i>
POM <i>Program Objective Memorandum</i>	SATCOM <i>Satellite Communications</i>
PPBS <i>Planning, Programming and Budgeting System</i>	SCN <i>Shipbuilding and Conversion, Navy</i>
PP&O <i>Plans, Policies and Operations</i>	SCRE <i>Stratified Charge Rotary Engine</i>
	SE <i>Supporting Establishment</i>

SEAD <i>Suppression of Enemy Air Defense System</i>	SPF <i>Special Purpose Force</i>
SEAL <i>Sea-Air-Land</i>	SRI <i>Surveillance, Reconnaissance, and Intelligence</i>
SEMP <i>Supporting Establishment Master Plan</i>	SRIG <i>Surveillance, Reconnaissance, and Intelligence Group</i>
SECDEF <i>Secretary of Defense</i>	SRAW <i>Short Range Anti-tank Weapon</i>
SECNAV <i>Secretary of the Navy</i>	STOVL <i>Short Take-Off Vertical Landing</i>
SHF <i>Super High Frequency</i>	SWA <i>Southwest Asia</i>
SIGINT <i>Signals Intelligence</i>	SWMCM <i>Shallow Water Mine Countermeasures</i>
SINCGARS <i>Single Channel Ground and Airborne Radio System</i>	TAC <i>Tactical Air Commander</i>
SIXCONS <i>Fuel/Water Storage and Pump Modules</i>	TACAIR <i>Tactical Air</i>
SLAR <i>Side Looking Airborne Radar</i>	TACC <i>Tactical Air Command Center</i>
SLEP <i>Service Life Extension Program</i>	TACDM <i>Tactical Decision Making</i>
SLOC <i>Sea Lines of Communication</i>	TAOM <i>Tactical Air Operations Module</i>
SMAW <i>Shoulder-Launched Multipurpose Assault Weapon</i>	TAH <i>Hospital Ship</i>
SMCR <i>Selected Marine Corps Reserve</i>	TAVB <i>Aviation Logistics Support Ship</i>
SNCO <i>Staff Noncommissioned Officer</i>	TBD <i>To Be Determined</i>
SOC <i>Special Operations Capable</i>	TCC <i>Tactical Communications Center</i>
SOI <i>School of Infantry</i>	TCO <i>Tactical Combat Operations</i>
SP <i>Self Propelled</i>	T/E <i>Table of Equipment</i>

TERPES
*Tactical Electronic
Reconnaissance Processing and
Evaluation System*

TM
Training Management

TOA
Total Obligational Authority

TOW
*Tube-Launched, Wire-Guided,
Optically-Tracked Missile*

TPCS
*Team Portable Communications
Intelligence System*

TQL
Total Quality Leadership

TRE
Tactical Receive Equipment

TRSS
Tactical Remote Sensor System

UAV
Unmanned Air Vehicle

UHF
Ultra High Frequency

ULCS
Unit Level Circuit Switch

UT&E
User Testing and Evaluation

VHF
Very High Frequency

V/STOL
*Vertical Short Take-Off and
Landing*

WASP
Wide Angle Stinger Pointer

WPN
Weapons Procurement, Navy

